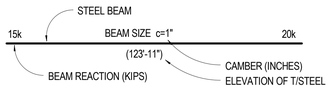
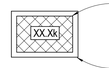
SYMBOLS LEGEND

SYMBOL	DESCRIPTION
	STEEL BEAM 15k BEAM SIZE c=1" 20k (123'-11") CAMBER (INCHES) BEAM REACTION (KIPS) ELEVATION OF T/STEEL
	DECK TYPE 2VLI DECK SPAN DIRECTION
	MOMENT CONNECTION
	BRACING
	PENETRATION THRU STRUCTURAL MEMBER
	GRID LINES

SYMBOL	DESCRIPTION
	ELEVATION SYMBOL
	STEP
	SLOPE
	KEY NOTE
	DRAWING REVISION NUMBER
	CURRENT REVISION CLOUD
	CAST-IN-PLACE CONCRETE (ON PLAN)
	MECHANICAL UNIT (XX.Xk = MECHANICAL UNIT OPERATING WEIGHT IN KIPS INCLUDING INERTIA BASE) EXTENT OF CONCRETE PAD
	BUILDING SECTION OR DETAIL CUT ON SHEET DRAWN
	WELDED-WIRE REINFORCEMENT

ABBREVIATIONS

/	Per
@	At
AB	Anchor Bolt
ADDNL	Additional
AFF	Above Finished Floor
ALT	Alternate
ALUM	Aluminum
APA	American Plywood Association
APPROX	Approximate
ARCH	Architect or Architectural
B/	Bottom of
BAL	Balance
BD	Board
BG	Backgouge
BL	Brick Ledge
BLDG	Building
BLKG	Blocking
BM	Beam
BN	Boundary Nail
BO	Bottom of
BOT or B	Bottom
BOS	Bottom of Steel
BRG	Bearing
BSMT	Basement
BTWN	Between
CC	Center to Center
CG	Center of Gravity
CIP	Cast-In-Place
CJ	Control Joint
CJP	Complete Joint Penetration
CL	Centerline
CLG	Ceiling
CLR	Clear
CMU	Concrete Masonry Unit
COL	Column
CONC	Concrete
CONN	Connection
CONST	Construction
CONT	Continue or Continuous
CONTR	Contractor
COORD	Coordinate
CSJ	Construction Joint
CTR(D)	Center(ed)
d	Penny
DAS	Deformed Anchor Stud
DBL	Double
DIA or Ø	Diameter
DIAG	Diagonal
DIM	Dimension
DL	Dead Load
DN	Down
DO	Ditto
DP	Drilled Pier or Deep
DT	Precast Double Tee
DTL(S)	Detail(s)
DWG(S)	Drawing(s)
DWL(S)	Dowel(s)
(E) or EXIST	Existing
EA	Each
EC	Epoxy Coated
EE	Each End
EF	Each Face
EJ	Expansion Joint
EL	Elevation
ELEV	Elevator
EMBED	Embedded
EN	Edge Nail
ENGR	Engineer
EOR	Engineer-of-Record
EOS	Edge of Slab
EQ	Equal
EQ SP	Equally Spaced
EQUIP	Equipment
ES	Each Side
EW	Each Way
E-W	East-West
EXP ANCH	Expansion Anchor
EXP	Expansion
EXT	Exterior
FAB	Fabricate
FF	Finished Floor
FIN	Finish(ed)
FLG	Flange
FLR	Floor
FND	Foundation
FO	Face Of
FP	Full Penetration or Fire Proofing
FRAM	Framing
FS	Far Side
FT	Foot or Feet
FTG	Footing
FV	Field Verify
GA	Gage or Gauge
GALV	Galvanized
GL	Glu-lam
GR	Grade or Grind
GR BM	Grade Beam
HDAR	Headed Anchor Rod
HD	Headed or Holdown
HAS or HDAS	Headed Anchor Stud
HDG	Hot Dipped Galvanized
HK	Hook
HORIZ	Horizontal
HT	Height
HVAC	Heating-Ventilating and A/C
ID	Inside Diameter
I.F.	Inside Face
IN	Inch
INT	Interior
IT	Precast Inverted Tee Beam
JST	Joist
JT	Joint
k	Kip
L or LG	Length
LB(S)	Pound(s)
LB	Precast L-Shaped Beam
LCE	Compression Embedment
LCS	Compression Lap Splice
LDH	Hook Development Length
LL	Live Load
LLH	Long Leg Horizontal
LLV	Long Leg Vertical
LOC(S)	Location(s) or Locate
LONG	Longitudinal
LSL	Laminated Strand Lumber
LT	Light
LTE	Tension Embedment
LTS	Tension Lap Splice Length
LT WT	Lightweight
LVL	Level or Laminated Veneer Lumber
LWC	Light Weight Concrete
MACH	Machine
MACH RM	Machine Room
MAS	Masonry
MATL	Material
MAX	Maximum
MBS	Metal Building Supplier
MCJ	Masonry Control Joint
MECH	Mechanical
MEP	Mech/Elect/Plumb
MIN	Minimum
MISC	Miscellaneous
ML	Micro-Lam
MLS	Masonry Lap Splice
mm	Millimeter
MNFR	Manufacturer
MO	Masonry Opening
MTL	Metal
N	North
NM	Non-Metallic
NS	Non-Shrink or Near Side
N-S	North-South
NIC	Not in Contract
NO or #	Number
NOM	Nominal
NTS	Not To Scale
NWC	Normal Weight Concrete
OAE	Or Approved Equivalent
OC	On Center
OD	Outside Diameter
O.F.	Outside Face
OH	Opposite Hand
OPNG	Opening
OPP	Opposite
OVS	Oversized
PAF	Power Actuated Fastener
PC	Precast
PEN	Penetration
PERP	Perpendicular
PL	Plate (Steel)
PLF	Pounds Per Lineal Foot
PREFAB	Prefabricated
PRELIM	Preliminary
PS	Prestressed
PSF	Pounds Per Square Foot
PSI	Pounds Per Square Inch
PT	Point or Post-Tension
QTY	Quantity
RAD or R	Radius
RB	Precast Rectangular Beam
RC	Reinforced Concrete
RE: or REF	Refer to (Reference)
REINF	Reinforce(ing)(d)(ment)
RET	Return
REQD	Required
REQT(S)	Requirement(s)
RO	Rough Opening
ROF	Random Oriented Fiber
(S)	Salvaged
SC	Slip Critical
SCHED	Schedule
SECT	Section
SIM	Similar
SLH	Short Leg Horizontal
SLV	Short Leg Vertical
SOG	Slab on Grade
S	South
SP @	Space At
SP	Space(s)
SPECS	Specifications
SPRT	Support
SS	Stainless Steel
STD	Standard
STIFF	Stiffener
STL	Steel
STR	Structural
SW	Shearwall
SYM	Symmetrical
T&B	Top & Bottom
T	Top
T/	Top of
THK	Thick or Thickness
TL	Total Load
T.O.	Top of
TOC	Top of Concrete
TOF	Top of Footing
TOM	Top of Masonry
TOPG	Topping
TOS	Top of Steel
TOW	Top of Wall
TRANS	Transverse
TYP	Typical
ULT	Ultimate
UNO	Unless Noted Otherwise
VERT	Vertical
VIF	Verify in Field
W/O	Without
W/	With
WD	Width or Wood
WF	Wide Flange
WP	Working Point or Waterproofing
WT	Weight
WWR	Welded Wire Reinforcement
WxH	Width x Height

SPECIAL INSPECTION NOTES

SPECIAL INSPECTION NOTES
1. SPECIAL INSPECTION:
1A. SPECIAL INSPECTION SHALL BE PROVIDED PER IBC 2006 SECTION 109 AND CHAPTER 17. THE LIST BELOW IS A SUMMARY OF REQUIRED TESTS, REFER TO THE SPECIFICATIONS FOR DETAILED TESTING REQUIREMENTS.

1B. CONCRETE
- STRUCTURAL CONCRETE
- REINFORCING STEEL PLACEMENT

1B. STRUCTURAL STEEL:
- SHOP AND FIELD WELDING
- ROOF DECK FASTENING
- COLD FORMED STRUCTURAL STEEL
- CONNECTIONS USING POWDER ACTUATED FASTENERS
- HIGH STRENGTH BOLTING
- TESTING OF PLATES FOR DELAMINATIONS AND INCLUSIONS

REQUIRED VERIFICATION AND INSPECTION OF CONC CONSTRUCTION

Reference: IBC 2006, Table 1704.4

TASK	CONTINUOUS	PERIODIC
INSPECTION OF REINFORCING STEEL, INCLUDING PLACEMENT	--	X
INSPECT BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONC	X	--
VERIFYING USE OF REQUIRED DESIGN MIX	--	X
AT THE TIME FRESH CONC IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONC	X	--
INSPECTION OF CONC PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X	--
INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	--	X
INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	--	X

REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION

Reference: IBC 2006, Table 1704.3

TASK	CONTINUOUS	PERIODIC
MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS AND WASHERS:		
- IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS	--	X
- MNFR'S CERTIFICATE OF COMPLIANCE REQD	--	X
INSPECTION OF HIGH-STRENGTH BOLTING:		
- BEARING-TYPE CONNECTIONS	--	X
- SLIP-CRITICAL CONNECTIONS	X	--
MATERIAL VERIFICATION OF STRUCTURAL STEEL:		
- IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS	--	X
- MNFR'S CERTIFIED MILL TEST REPORTS	--	X
MATERIAL VERIFICATION OF WELD FILLER MATERIALS:		
- IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS	--	X
- MNFR'S CERTIFICATE OF COMPLIANCE REQD	--	X
INSPECTION OF WELDING:		
- STRUCTURAL STEEL:		
1) COMPLETE AND PARTIAL PEN GROOVE WELDS	X	--
2) MULTIPASS FILLET WELDS	X	--
3) SINGLE-PASS FILLET WELDS > 5/16"	X	--
4) SINGLE-PASS FILLET WELDS ≤ 5/16"	--	X
5) FLOOR AND ROOF DECK WELDS	--	X
INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS:		
- DETAILS SUCH AS BRACING AND STIFFENING	--	X
- MEMBER LOCATIONS	--	X
- APPLICATION OF JOINT DETAILS AT EACH CONNECTION	--	X

REQUIRED VERIFICATION AND INSPECTION OF LIGHT GAUGE STEEL

TASK	CONTINUOUS	PERIODIC
VERIFY SIZE, TYPE, MECHANICAL PROPERTIES, AND SPACING OF ELEMENTS	--	X
CONFIRM THAT PUNCHOUTS MEET SPACING REQUIREMENTS AND THAT REINFORCING IS USED WHERE REQUIRED	--	X
VERIFY THAT THERE ARE NO FIELD CUTS OR NOTCHES THROUGH FLANGES OR LIPS OF ANY MEMBERS UNLESS APPROVED BY THE EOR	--	X
SCREWS		
- SIZE, TYPE, SPACING, AND EDGE DISTANCE	--	X
- VERIFY ALL SCREWS ARE FULLY DRIVEN AND HAVE A MINIMUM PENETRATION OF AT LEAST (3) THREADS THROUGH THE LAST COMPONENT JOINED	--	X
- CHECK FOR POPPED SCREW HEADS	--	X
- CHECK FOR STRIPPED SCREWS	--	X
- VERIFY THAT SCREWS PENETRATE INDIVIDUAL COMPONENTS IN CONNECTIONS WITHOUT CAUSING PERMANENT SEPARATION BETWEEN THE COMPONENTS	--	X
PAFS		
- SIZE, TYPE, SPACING, AND EDGE DISTANCE	--	X
- VERIFY THAT PINS ARE FULLY DRIVEN AND HAVE A MINIMUM PENETRATION OF 1/4" THROUGH THE LAST COMPONENT JOINED	--	X
WELDING		
- SIZE AND SPACING	--	X
- CONFIRM WELDED AREAS TREATED WITH APPROVED TREATMENT TO MATCH CORROSION RESISTANCE OF EFFECTED AREA	--	X
WALL FRAMING		
- GAP DISTANCE BETWEEN STUD AND TRACK, USE OF SHIMS	--	X
- ALIGNMENT OF FRAMING FROM ONE LEVEL TO THE OTHER	--	X
- BRACING LOCATIONS AND CONNECTIONS	--	X

DESIGN CRITERIA

DESIGN CRITERIA
1. CODES AND STANDARDS:
1A. GENERAL DESIGN
- INTERNATIONAL BUILDING CODE 2006
1B. LOADS
- ASCE/SEI 7-05 "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES"

1C. CONCRETE
- ACI 301-05 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"
- ACI 318-05 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"

1E. STEEL
- ANSI/AISC 341-05: "SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS"
- ANSI/AISC 360-05: "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS"

2. SEISMIC LOADS
- SEISMIC DESIGN CATEGORY = A
- OCCUPANCY CATEGORY = IV
- EARTHQUAKE IMPORTANCE FACTOR, Ie = 1.5
- MAPPED SPECTRAL RESPONSE ACCELERATION, Ss= 0.02
- MAPPED SPECTRAL RESPONSE ACCELERATION, S1= 0.05
- DESIGN SPECTRAL RESPONSE COEFFICIENT, SDs = 0.016
- DESIGN SPECTRAL RESPONSE COEFFICIENT, SD1 = 0.057
- SOIL SITE CLASS = C
- BASIC STRUCTURAL SYSTEM: STEEL COLUMNS AND BEAMS WITH METAL DECK
- STRUCTURAL SEISMIC LATERAL SYSTEM: TIE METAL DECK DIAPHRAGM INTO (E) BUILDING LATERAL SYSTEM
- RESPONSE MODIFICATION FACTOR, R = 4 1/2
- SEISMIC RESPONSE COEFFICIENT, Cs= 0.01
- SYSTEM OVERSTRENGTH FACTOR, OMEGA = 2 1/2
- DESIGN BASE SHEAR EAST-WEST DIRECTION = 1.1 KIPS
- DESIGN BASE SHEAR NORTH-SOUTH DIRECTION = 1.1 KIPS
- SEISMIC ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE

3. WIND LOADS
- OCCUPANCY CATEGORY = IV
- WIND IMPORTANCE FACTOR, Iw = 1.15
- BASIC WIND SPEED = 100 MPH
- EXPOSURE CATEGORY = C
- INTERNAL PRESSURE COEFFICIENT, GCpi = +/- 0.18

4. DESIGN WIND PRESSURE FOR COMPONENTS AND CLADDING AND ELEMENTS DESIGNED BY THE CONTRACTOR
- PRESSURES LISTED BELOW ARE BASED ON 10 SF EFFECTIVE WIND AREA. FINAL CALCULATIONS TO BE COMPLETED BY CONTRACTOR
- TYPICAL WALL AREA INWARD PRESSURE = 28 PSF
- TYPICAL WALL AREA OUTWARD PRESSURE = 30 PSF
- WALL CORNERS (OUTWARD PRESSURE) = 36 PSF
- TYPICAL ROOF AREA (OUTWARD PRESSURE) = 35 PSF
- ROOF EAVES, RAKES, RIDGES AND CORNERS (OUTWARD) = 41 PSF

5. LATERAL LOAD RESISTING SYSTEM DESCRIPTION:
- THE NEW BUILDING FRAMING WILL BE TIED INTO THE EXISTING LATERAL SYSTEM OF CONCRETE SHEAR WALLS

6. GRAVITY LOADS
6A. SEE GRAVITY LOADS TABLE

GRAVITY LOADS TABLE

LOCATION	SUPERIMPOSED DEAD LOAD (PSF)	LIVE LOAD (PSF)	LIVE LOAD REDUCTION	PARTITION LOAD (PSF)	POINT LOAD (LB)
ROOF	22	30 MIN UNIFORM LOAD, SEE NOTE b FOR SNOW LOADS	No	--	--
LOBBIES, EXIT FACILITIES	--	100	No	15	2000
OPERATING ROOMS	--	60	No	INCLUDED IN LL	2000

7. GRAVITY LOADS:
7A. SEE LOAD KEY SHEETS FOR SUPERIMPOSED DEAD LOAD AND LIVE LOADS USED IN DESIGN.

7B. DRIFTING, SLIDING AND UNBALANCED SNOW
- GROUND SNOW LOAD = 20 PSF
- SNOW EXPOSURE FACTOR Ce = 1.0
- SNOW LOAD IMPORTANCE FACTOR Is = 1.2
- THERMAL FACTOR Ct = 1.0
- FLAT ROOF SNOW LOAD Pf = 30PSF

8. FIRE RESISTANCE, CONDITIONS OF RESTRAINT:
FOR DETERMINING FIRE-RESISTANCE RATINGS PER IBC SECTION 703, ALL CONSTRUCTION IS ASSUMED TO BE UNRESTRAINED.

SPECIAL INSPECTION NOTES

SHEET NUMBER	SHEET TITLE
S0.1	SYMBOLS, SHEET LIST, & DESIGN CRITERIA
S0.2	GENERAL NOTES
S1.1	SECOND FLOOR PLAN
S1.2	ROOF FRAMING PLAN
S5.0	STEEL DETAILS
S5.1	MTL DECK DETAILS
S5.2	MTL STUD DETAILS

DESIGNERS:
DATE PRINTED: 4/24/2009 12:33:23 PM
MM JOB #: Project Number
PRINCIPAL/EOR:
PROJECT MANAGER:

Revisions: | Date

CONSULTANTS:

STRUCTURAL
MARTIN / MARTIN, Inc.
12499 West Colfax Avenue
P.O. Box 151500
Lakewood, CO 80215
(303) 431-6100

MECHANICAL, PLUMBING, AND ELECTRICAL
Smith Seckman Reid, Inc. 4725 South Monaco Street
Suite 200
Denver, CO 80237
(303) 779-1222

PLAN NORTH
SCALE: 1/8" = 1'-0"

ARCHITECT/ENGINEERS:
HEERY design
Heery International Inc.
820 16th Street Mall,
Suite 200,
Denver, CO 80202-3219
720.946.0276

Drawing Title: SYMBOLS, SHEET LIST, & DESIGN CRITERIA
Approved: Project Director
Project Title: SURGERY RENOVATION AND EXPANSION
Location: CHEYENNE, WY
Date: 04/24/09 | Checked: LK | Drawn: CM
Project Number: VA-259-09-RA-209
Building Number: BLDG. NO. 1
Drawing Number: S0.1
Dwg. 1 of 7

Office of Construction and Facilities Management
Department of Veterans Affairs

VA FORM 08-6231

GENERAL NOTES

SECTION 1 – GENERAL REQUIREMENTS

1. GENERAL:
1A. ENGINEER: REFERENCES ON THE STRUCTURAL DRAWINGS TO 'ENGINEER' MEAN THE STRUCTURAL ENGINEER OF RECORD. OTHER ENTITIES ARE SPECIFICALLY NOTED AS "CONTRACTOR'S ENGINEER", "MECHANICAL ENGINEER", ETC.

1B. THESE NOTES SUPPLEMENT THE SPECIFICATIONS, WHICH SHALL BE REFERENCED FOR ADDITIONAL REQUIREMENTS.

1C. STRUCTURAL ELEMENTS ARE CENTERED ON GRID LINES AND GRID LINE INTERSECTIONS UNLESS DIMENSIONED OTHERWISE.

2. EXISTING STRUCTURES:
2A. CONTRACT DOCUMENTS HAVE BEEN PREPARED USING AVAILABLE DRAWINGS AND SITE OBSERVATION AS PERMITTED BY ACCESS RESTRICTIONS DURING DESIGN.

2B. DURING CONSTRUCTION, THE CONTRACTOR MAY ENCOUNTER EXISTING CONDITIONS WHICH ARE NOT NOW KNOWN OR ARE AT VARIANCE WITH PROJECT DOCUMENTATION. CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ALL CONDITIONS NOT PER THE CONTRACT DOCUMENTS. EXAMPLES INCLUDE:
- SIZES OR DIMENSIONS OTHER THAN THOSE SHOWN
- DAMAGE OR DETERIORATION TO MATERIALS AND COMPONENTS
- CONDITIONS OF INSTABILITY OR LACK OF SUPPORT
- ITEMS NOTED AS EXISTING ON THE DRAWINGS BUT NOT FOUND IN THE FIELD

2C. PREPARE DIMENSIONAL DRAWINGS OF ALL DISCOVERED ITEMS.

2D. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING STRUCTURAL CONDITIONS PRIOR TO SUBMITTING SHOP DRAWINGS.

2E. CONTRACTOR SHALL MAKE ALLOWANCE FOR THE RESOLUTION OF SUCH DISCOVERIES IN THE CONSTRUCTION SCHEDULE.

2F. SUBMIT A DIMENSIONED DRAWING OF ALL NEW OPENINGS THROUGH EXISTING STRUCTURE AND SECURE APPROVAL PRIOR TO CUTTING. DRAWING SHALL SHOW VERTICAL & HORIZONTAL LOCATION AND SIZE OF PROPOSED OPENING.

3. USE OF DRAWINGS:
3A. DO NOT SCALE DRAWINGS.

3B. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL NOTES AND SPECIFICATIONS, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN. DETAILS ON DRAWINGS TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. DETAILS NOTED TYPICAL APPLY TO ALL SIMILAR CONDITIONS. WHERE NO SPECIFIC DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ELSEWHERE ON THE PROJECT.

4. TEMPORARY CONDITIONS:
4A. THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL TEMPORARY BRACING AND/OR SUPPORT THAT MAY BE REQUIRED AS THE RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES. REFER TO "LATERAL LOAD RESISTING SYSTEM DESCRIPTION" IN DESIGN CRITERIA FOR ADDITIONAL INFORMATION.

4B. CONTRACTOR'S CONSTRUCTION AND/OR ERECTION SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD.

5. SUBMITTALS AND SUBSTITUTIONS:
5A. SUBMITTALS: REFER TO SPECIFICATIONS FOR DETAILED REQUIREMENTS.
- IF THE CONTRACTOR REQUESTS A CHANGE FROM THE STRUCTURAL DRAWINGS, IT SHALL BE APPROVED BY THE ARCHITECT AND DESIGNED BY MARTIN/MARTIN, INC. PRIOR TO SUBMITTING SHOP DRAWINGS. VARIATION SHALL BE INDICATED ON THE SHOP DRAWINGS. CONTRACTOR SHALL COMPENSATE MARTIN/MARTIN, INC. FOR MAKING THE CHANGE.
- CONSTRUCTION DOCUMENTS SHALL NOT BE REPRODUCED FOR USE IN SUBMITTALS
- ALL SHOP DRAWINGS SHALL REFERENCE THE STRUCTURAL DRAWING NUMBER AND DETAIL USED TO PREPARE THE SUBMITTAL
- SUBMIT A STATEMENT OF RESPONSIBILITY FOR THE CONSTRUCTION OF THE LATERAL LOAD RESISTING SYSTEM IDENTIFIED IN THE DESIGN CRITERIA IN ACCORDANCE WITH IBC SECTION 1706

5B. SUBSTITUTIONS: ARCHITECTS APPROVAL SHALL BE SECURED FOR ALL SUBSTITUTIONS

5C. NONCONFORMANCE: NOTIFY ARCHITECT OF CONDITIONS NOT CONSTRUCTED PER THE CONTRACT DOCUMENTS PRIOR TO PROCEEDING WITH CORRECTIVE WORK. SUBMIT PROPOSED REPAIR TO THE ARCHITECT FOR ACCEPTANCE. CONTRACTOR SHALL COMPENSATE MARTIN/MARTIN, INC. FOR DESIGNING THE REPAIR.

5D. ALL SHOP DRAWINGS SHALL BE SUBMITTED IN 24x36, 11x17 AND 8-1/2x11 FORMAT ONLY.

6. OSHA STANDARDS:
6A. THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. NOTHING SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE CONSTRUED AS ELIMINATING THE NEED FOR THE CONTRACTOR TO COMPLY WITH ALL OSHA REQUIREMENTS.

6B. THE CONTRACTOR SHALL ADD ALL NECESSARY BOLTS, ANCHOR BOLTS, PLATES, STIFFENER PLATES, STABILIZER PLATES, BRIDGING, BRACING, BEARING SEATS, COLUMN SPLICES, ETC., AS WELL AS CLOSURES FOR OPENINGS. IN ADDITION, FIELD WELD ANYTHING THAT MAY BE CONSIDERED A TRIP HAZARD, SUCH AS SHEAR STUDS, AFTER PROTECTIVE DECKING IS INSTALLED.

6C. WASHERS OR RINGS MAY BE WELDED TO COLUMNS TO PROVIDE FOR SAFETY CABLES. DO NOT PLACE HOLES IN COLUMNS WITHOUT APPROVAL OF THE STRUCTURAL ENGINEER. ADJUST LOCATIONS OR ADD COLUMN SPLICES AS NECESSARY TO COMPLY WITH OSHA REQUIREMENTS. SUBMIT PROPOSED LOCATIONS.

6E. WHERE THE STRUCTURAL DRAWINGS APPEAR TO CONFLICT WITH OSHA REQUIREMENTS, THE STRUCTURAL DRAWINGS REPRESENT FINAL CONDITIONS ONLY. THE CONTRACTOR SHALL ADD ALL ERECTION FRAMING NECESSARY TO COMPLY WITH OSHA.

7. CONSTRUCTION ENGINEERING:
7A. THE STRUCTURE DEFINED ON THE CONTRACT DOCUMENTS HAS BEEN DESIGNED ONLY FOR LOADS ANTICIPATED ON THE STRUCTURE DURING ITS SERVICE LIFE. PROVIDE ALL REQUIRED ENGINEERING AND OTHER MEASURES TO ACHIEVE THE MEANS, METHODS, AND SEQUENCES OF WORK. SUCH ENGINEERING MAY INCLUDE, BUT IS NOT LIMITED TO:
- LAYOUT
- ERECTION PROCEDURES WHICH ADDRESS STABILITY OF THE FRAME DURING CONSTRUCTION
- WELD PROCEDURES
- DESIGN OF TEMPORARY BRACING OF WALLS FOR WIND OR SEISMIC
- SURVEYING TO VERIFY CONSTRUCTION TOLERANCES
- EVALUATION OF TEMPORARY CONSTRUCTION LOADS ON STRUCTURE DUE TO EQUIPMENT AND MATERIALS
- STRUCTURAL ENGINEERING TO RESIST ANY OTHER LOADS NOT IDENTIFIED ON DESIGN DRAWINGS

8. COORDINATION:
8A. STRUCTURAL DRAWINGS ARE NOT STAND-ALONE DOCUMENTS AND ARE INTENDED TO BE USED IN CONJUNCTION WITH CIVIL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND DRAWINGS FROM OTHER DISCIPLINES. THE CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS INTO SHOP DRAWINGS AND WORK.

8B. COORDINATE DIMENSIONS OF ALL OPENINGS, BLOCKOUTS, DEPRESSIONS, ETC., WITH ARCHITECTURAL DRAWINGS, DRAWINGS FROM OTHER DISCIPLINES, AND FIELD CONDITIONS PRIOR TO SHOP DRAWING SUBMITTAL.

8C. SEE ARCHITECTURAL PLANS FOR INTERIOR PARTITIONS. PARTITION FRAMING SHALL BE CONNECTED TO THE PRIMARY STRUCTURE IN SUCH A WAY SO AS TO ALLOW FOR VERTICAL LIVE LOAD DEFLECTIONS OF SPAN/240 OF THE ROOF FRAMING. DO NOT MAKE RIGID VERTICAL AND HORIZONTAL CONNECTIONS TO THE PRIMARY STRUCTURE IN THE PLANE OF THE WALL.

9. DRAWINGS STAMPED OR NOTED AS "NOT FOR CONSTRUCTION" ARE PRELIMINARY AND SUBJECT TO CHANGE.

10. USE THE MOST CURRENT DRAWINGS IN PREPARATION OF SUBMITTALS. ALL SUBMITTALS SHALL LIST DATE OF DRAWINGS USED TO PREPARE THE SUBMITTAL.

CONCRETE NOTES

SECTION 3 – STRUCTURAL CONCRETE
1. GENERAL:
1A. ALL WORK SHALL CONFORM WITH ACI 301, LATEST EDITION, UNLESS NOTED OTHERWISE IN DRAWINGS OR PROJECT SPECIFICATIONS.

1B. DETAIL BARS IN ACCORDANCE WITH THE LATEST EDITIONS OF PUBLICATION SP-66: "ACI DETAILING MANUAL" WITH ADDED REQUIREMENTS OF THE PROJECT SPECIFICATION AND ACI 318: "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE."

2. REINFORCING MATERIALS:
2A. SEE 'REINFORCING MATERIALS TABLE'

3. REINFORCING FABRICATION:
3A. SPLICES:
- NO SPLICING OF REINFORCEMENT PERMITTED EXCEPT AS NOTED ON DRAWINGS. WHERE PERMITTED, SPLICES MAY BE MADE BY CONTACT LAPS

3B. MISCELLANEOUS REINFORCING REQUIREMENTS:
- PROVIDE ADDITIONAL BARS OR STIRRUPS AS REQUIRED TO SECURE REINFORCING IN PLACE DURING CONCRETE PLACEMENT.
- MAKE ALL REINFORCING BAR BENDS IN THE FABRICATOR'S SHOP UNLESS NOTED.
- NO WELDING OF REINFORCING PERMITTED UNLESS NOTED ON DRAWINGS. WHERE PERMITTED, PERFORM WELDING IN ACCORDANCE WITH AWS D1.4, LATEST EDITION.

4. STRUCTURAL CONCRETE MIX REQUIREMENTS:
4A. SEE 'CONCRETE MIX TABLE'

5. NON-SHRINK GROUT:
5A. CONFORM TO ASTM C1107, GRADES B, OR C.

5B. ACHIEVE 6000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.

6. PLACING REINFORCEMENT:
6A. REINFORCEMENT PROTECTION:
- SEE 'CONCRETE COVER TABLE'
- SEE ACI 318-05 7.5 FOR REINFORCEMENT PLACING TOLERANCES AND ACI 117 FOR ADDITIONAL REQUIREMENTS

6B. PROVIDE ACCESSORIES NECESSARY TO PROPERLY SUPPORT REINFORCING AND WELDED WIRE FABRIC AT POSITIONS SHOWN ON PLANS. ALL REINFORCING, DOWELS, BOLTS, AND EMBEDDED PLATES SHALL BE SET AND TIED IN PLACE BEFORE THE CONCRETE IS POURED. "STABBING" INTO PREVIOUSLY PLACED CONCRETE IS NOT PERMITTED.

CONCRETE MIX TABLE

CONC MIX TYPE	INTENDED USE	28 DAY STRENGTH, f'c (KSI)	CONCRETE WEIGHT	MAX W/C RATIO, INCLUDING FLY ASH	MIN CEMENT MATERIAL (#/CY), INCLUDING FLY ASH	MAX AGGREGATE SIZE (IN), NOTE a	SLUMP LIMITS (IN), TOLERANCE = +1", -1"	TOTAL AIR CONTENT (%), NOTE b	CEMENT TYPE	REQUIRED ADMIXTURES, NOTE c	OTHER REQUIREMENTS, NOTE d
1	MECHANICAL UNIT PAD AND SLAB INFILL	3	NWC	0.50	470	3/4	6	6	II	AE, WRA	

CONCRETE MIX TABLE NOTES:
a. FOR THE MAXIMUM COARSE AGGREGATE SIZE INDICATED, USE THE FOLLOWING AGGREGATE SIZE NUMBERS PER ASTM C33:
3/4": #67 AGGREGATE
b. TOTAL AIR CONTENT LIMITS INCLUDE BOTH ENTRAINED AND ENTRAPPED AIR +/- 1 1/2%.
c. ABBREVIATIONS FOR REQUIRED ADMIXTURES AS FOLLOWS:
AE = AIR-ENTRAINING ADMIXTURE. DO NOT USE ENTRAINED AIR FOR STEEL TROWELED FINISHED CONCRETE.
WRA = WATER REDUCING ADMIXTURE.
d. FOR CONCRETE PLACED BY PUMPING PROVIDE CONCRETE MIX FLOWABILITY TO FACILITATE PUMPING.

REINFORCING MATERIAL TABLE

REINF ELEMENT	ASTM	Fy (KSI)	Fu (KSI)	COMMENTS
TYP REINFORCING	A615	60	90	--
WELDED & FIELD BENT REINF	A706	60	80	--
WELDED WIRE REINFORCING, SMOOTH	A185	65	75	--
WELDED WIRE REINFORCING, DEFORMED	A497	70	80	--

CONCRETE COVER

CASE	COVER (IN)
CONCRETE PLACED IN FORMS, EXPOSED TO WEATHER OR EARTH	2
SLABS OR WALLS NOT EXPOSED TO EARTH OR WEATHER	1

STEEL NOTES

SECTION 5 – METALS
1. CONNECTIONS:
1A. PROVIDE CONNECTIONS AS SHOWN IN THE DETAILS HEREIN. REFER TO SPECIFICATION FOR ALTERNATIVES AND CONNECTIONS NOT SHOWN.\

1B. ALL BOLTS SHALL BE 3/4"Ø ASTM A325N UNO.

2. WELDING REQUIREMENTS:
2A. WELDERS: HAVE IN POSSESSION CURRENT EVIDENCE OF PASSING THE APPROPRIATE A.W.S. QUALIFICATION TESTS.

2B. MINIMUM WELDS: AISC SPECIFICATION, NOT LESS THAN 3/16" FILLET, CONTINUOUS UNLESS OTHERWISE NOTED.

2C. WELD SIZES AND LENGTHS CALLED FOR ON THE DRAWINGS ARE THE NET EFFECTIVE REQUIRED. INCREASE WELD SIZE IF GAPS EXIST AT THE FAYING SURFACE.

2D. WELD SIZES SHALL BE AS SHOWN UNLESS A GREATER SIZE IS REQUIRED BY ANSI/AISC 360-05 TABLES J2.3 AND J2.4.

2E. ALL GROOVE WELDS SHALL BE COMPLETE PENETRATION UNLESS NOTED.

2F. FIELD WELDING SYMBOLS INDICATE SUGGESTED CONSTRUCTION PROCEDURES.

4. CAMBER:
4A. CAMBER SHOWN IS BASED ON THE COMPUTED DEFLECTION OF THE BEAM DUE TO SELFWEIGHT AND DEAD LOADS.

4B. VALUE NOTED ON PLAN IS IN-PLACE CAMBER, AFTER ERECTION. ADJUST FABRICATION AS REQUIRED TO ACHIEVE CAMBER SPECIFIED WITHIN TOLERANCES.

5. STRUCTURAL STEEL INSTALLATION:
5A. ALL HIGH STRENGTH BOLTS USED IN CONNECTIONS OF BEAMS AND GIRDERS TO COLUMNS AND WHERE NOTED ON THE DRAWINGS AS TYPE "SC" OR OTHER TYPE FOLLOWED BY "PT", SHALL BE TENSIONED TO THE VALUES OF TABLE J3.1 OF ANSI/AISC 360-05. OTHER HIGH-STRENGTH BOLTS MAY BE INSTALLED SNUG TIGHT AS DEFINED BY AISC.

7. METAL DECK:
7A. SEE METAL DECK DETAILS FOR MATERIALS, PROFILE, AND CONNECTIONS TO STRUCTURE.

7B. DECK DESIGN IS IN ACCORDANCE WITH STEEL DECK INSTITUTE (SDI) PUBLICATION NO. 31 AND DIAPHRAGM DESIGN MANUAL, LATEST EDITIONS.

7C. INSTALL DECK OVER 4 SUPPORTS (3 SPAN CONTINUOUS) UNLESS NOTED OTHERWISE. DO NOT INSTALL DECK AS SINGLE SPAN UNLESS SPECIFICALLY SHOWN ON DRAWINGS.

7D. PROVIDE DECK ATTACHMENTS AS NOTED ON DRAWINGS.

7E. HANGERS: SEE TYPICAL METAL DECK DETAILS FOR ALLOWABLE HANGER LOADS, SPACING AND ATTACHMENT.

8. STRUCTURAL COLD FORMED METAL FRAMING:
8A. REFER TO SCHEDULE FOR REQUIRED STUD MATERIAL GRADES AND SECTION PROPERTIES.

8B. REFER TO DETAILS FOR CONNECTIONS AND OTHER REQUIREMENTS.

STEEL MATERIAL TABLE

STEEL ELEMENT	ASTM/TYPE	Fy (KSI)	Fu (KSI)	COMMENTS
ADHESIVE	HILTI HY 150 MAX OR EQUIV	--	--	
ADHESIVE ANCHORS	A193 B7	--	125	THREADED ROD
ANCHOR RODS	F1554 GR 55	55	75	WELDABLE, HEAVY HEX HEADED
BOLTS	A325 OR F1852	--	120	BOLTS ARE 3/4"Ø UNO, USE TENSION-CONTROLLED WHERE POSSIBLE
COLD-FORMED STUDS/PLATE, 16 GAGE OR HEAVIER		50	--	--
COLD-FORMED STUDS/PLATE, 20-18 GAGE		33	--	--
COLD-FORMED TRACK, ALL GAGES		33	--	--
DAS	A496	70	80	--
EXPANSION ANCHORS	HILTI KWIK BOLT TZ OR EQUIV	--	--	SUBMIT ICC EVALUATION REPORT
HAS	A108	51	65	STUDS ARE 3/4"Ø UNO
OTHER SHAPES	A36	36	58	--
PIPE	A53 GR B	35	60	--
PLATES	A36	36	58	--
RECT HSS	A500 GR B	46	58	--
ROUND HSS	A500 GR B	42	58	--
SCREW ANCHORS	HILTI HUS-H OR EQUIV	--	--	SUBMIT ICC EVALUATION REPORT
SLEEVE ANCHORS	HILTI HLC OR EQUIV	--	--	SUBMIT ICC EVALUATION REPORT
WELDING ELECTRODES	E70	--	--	PER AWS
WF, WT	A992	50	65	--

METAL GAGE CONVERSION

GAUGE	MINIMUM THICKNESS (MILS)
12	97
14	68
16	54
18	43
20	33
22	27

DESIGNERS:
DATE PRINTED: 4/24/2009 12:33:25 PM
MM JOB #: Project Number
PRINCIPAL/EOR:
PROJECT MANAGER:

Revisions: | Date

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PLAN NORTH
SCALE: 1/8" = 1'-0"

ARCHITECT/ENGINEERS:
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Drawing Title: GENERAL NOTES
Approved: Project Director
Project Title: SURGERY RENOVATION AND EXPANSION
Location: CHEYENNE, WY
Date: 04/24/09 | Checked: LK | Drawn: CM
Project Number: VA-259-09-RA-209
Building Number: BLDG. NO. 1
Drawing Number: S0.2
Dwg. 2 of 7

Office of Construction and Facilities Management
Department of Veterans Affairs

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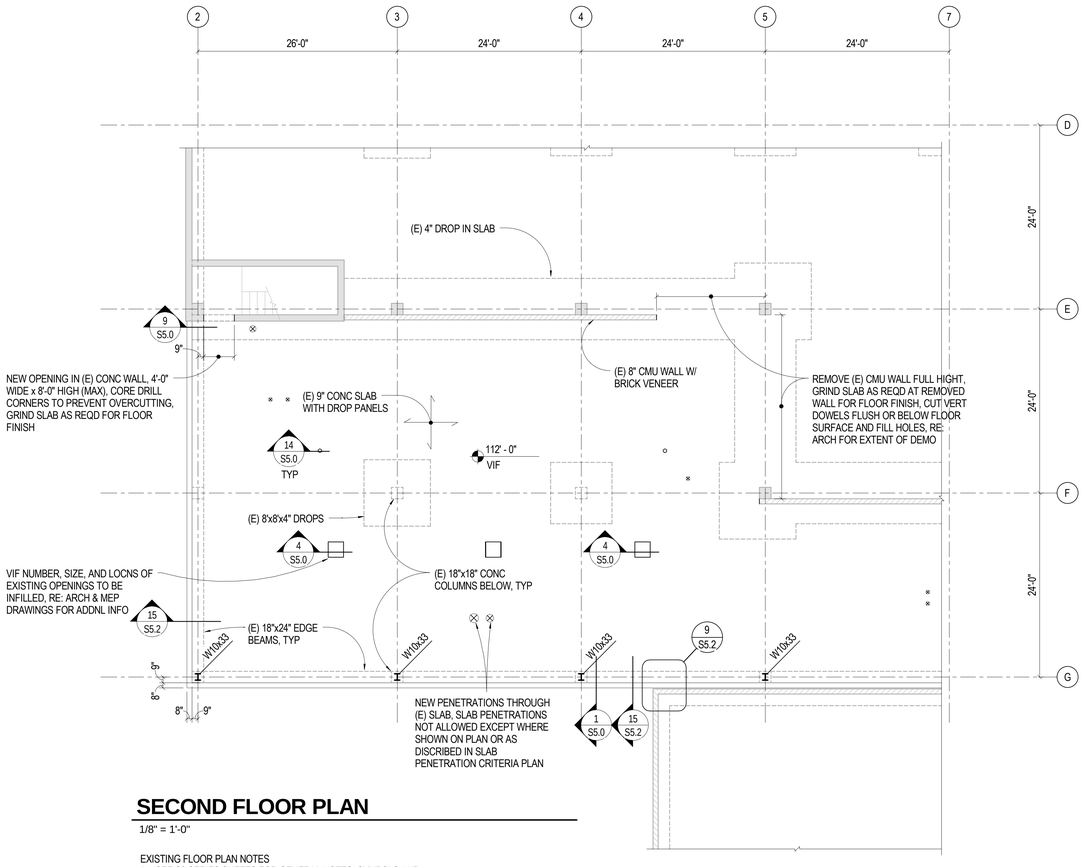
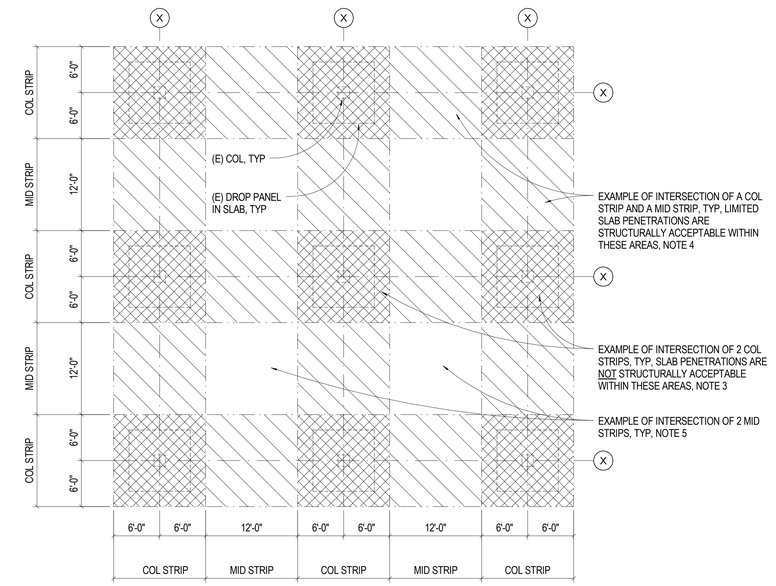


SECOND FLOOR PLAN

1/8" = 1'-0"

EXISTING FLOOR PLAN NOTES
1. SEE S0 SERIES SHEETS FOR GENERAL NOTES, SYMBOLS AND ABBREVIATIONS.
2. SEE S5 SERIES SHEETS FOR TYPICAL DETAILS.
3. VIF (E) SLAB ELEVATION(S), SUBMIT DEVIATIONS OVER 1/4" TO ARCH FOR REVIEW.



SLAB PENETRATION CRITERIA

1/8" = 1'-0"

ALLOWABLE PENETRATION NOTES:
1. THE PLAN SHOWS A TYPICAL BAY OF THE (E) BUILDING AND DESIGNATES WHERE COL STRIPS AND MID STRIPS IN THE SLAB ARE LOCATED. THE STRIPS DICTATE THE RESTRICTIONS ON NEW OPENINGS IN THE (E) SLAB.
2. (E) COLUMNS AND DROP PANELS IN THE SLAB ARE SHOWN FOR CLARITY.
3. NO PENETRATIONS ARE ALLOWED IN THE INTERSECTION OF 2 COL STRIPS NOTED THUS:
4. PENETRATIONS ARE ALLOWED IN THE INTERSECTION OF A COL STRIP AND A MID STRIP NOTED THUS: UP TO A TOTAL (3) 8"Ø PENETRATIONS ALLOWED SPACED AT 2'-0" (MIN) AROUND THE PERIMETER OF ANY ONE COLUMN. VIF LOCATION OF (E) SLAB REINF, NEW PENETRATIONS SHALL NOT CUT (E) SLAB REINF.
5. ROUND PENETRATIONS ARE ALLOWED IN THE INTERSECTION OF 2 MID STRIPS UP TO (2) 16"Ø PENETRATIONS ALLOWED. VIF LOCATION OF (E) SLAB REINF, NEW PENETRATIONS SHALL BE LOCATED SUCH THAT ONLY ONE REINFORCING BAR CAN BE CUT IN EACH DIRECTION AT OPENINGS.
6. CONTRACTOR SHALL SUBMIT PROPOSED PENETRATIONS IN (E) SLAB TO ARCH/ENGINEER FOR APPROVAL. NO PENETRATIONS SHALL BE CUT WITH OUT THE PRIOR APPROVAL OF THE ARCH/ENGINEER. ALL PENETRATIONS FROM ALL TRADES TO BE SUBMITTED PRIOR TO FINAL APPROVAL.

Revisions: | Date

CONSULTANTS:

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PLAN NORTH

SCALE: 1/8" = 1'-0"

ARCHITECT/ENGINEERS:

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Drawing Title: SECOND FLOOR PLAN
Approved: Project Director

Project Title: SURGERY RENOVATION AND EXPANSION
Location: CHEYENNE, WY
Date: 04/24/09 | Checked: LK | Drawn: CM

Project Number: VA-259-09-RA-209
Building Number: BLDG. NO. 1
Drawing Number: S1.1
Dwg. 3 of 7

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Department of Veterans Affairs

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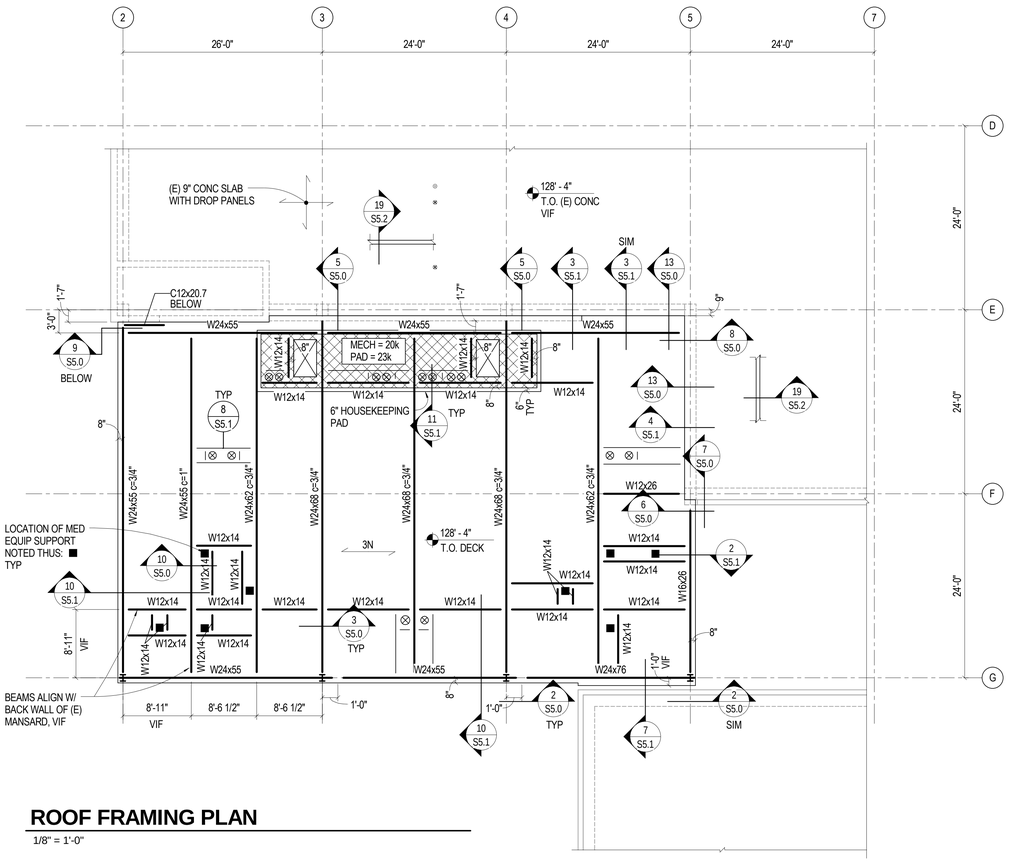
MM JOB #: Project Number
PRINCIPAL/EOR:
PROJECT MANAGER:

VA FORM 08-6231

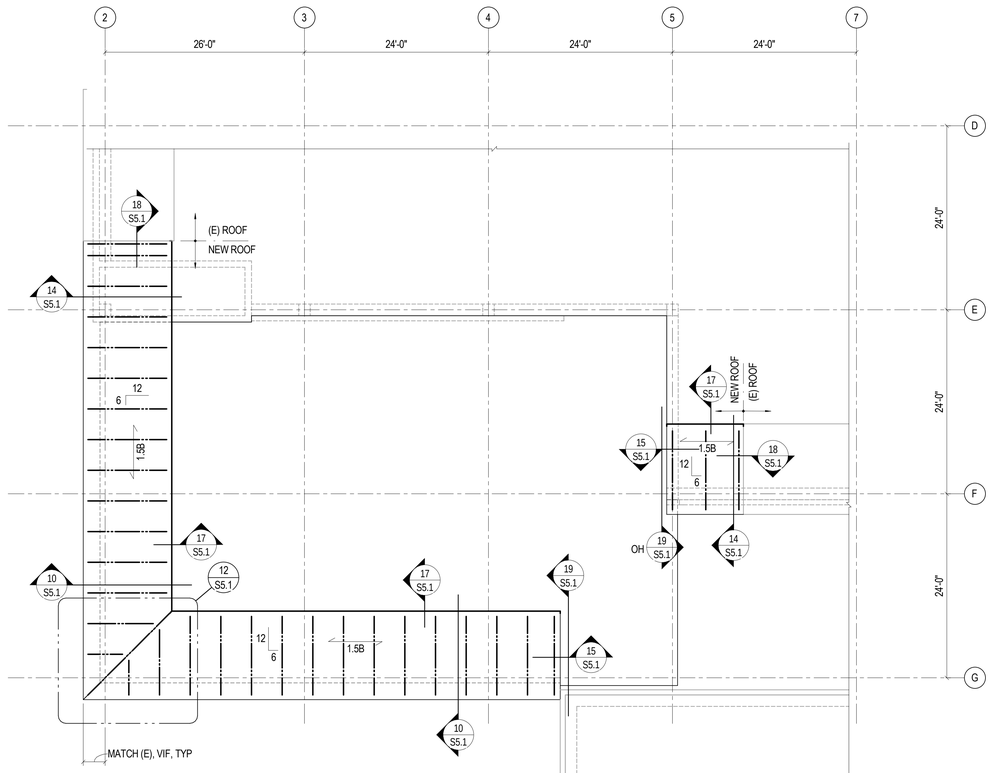


ROOF FRAMING PLAN

1/8" = 1'-0"

STEEL ROOF FRAMING PLAN NOTES

1. SEE S0 SERIES SHEETS FOR GENERAL NOTES, SYMBOLS AND ABBREVIATIONS.
2. CONTRACTOR TO VERIFY ALL EQUIPMENT WEIGHTS, SIZES, LOCATIONS, AND OPENINGS REQUIRED WITH MECHANICAL CONTRACTOR. CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER OF ANY CHANGES IN THE WEIGHTS OR LOCATIONS SHOWN ON THE DRAWINGS. SUCH CHANGES IN CONDITIONS SHALL BE SUBJECT TO STRUCTURAL ENGINEER REVIEW. RE: MECHANICAL AND ARCHITECTURAL DRAWINGS FOR ADDITIONAL OPENINGS NOT SHOWN.
3. MECHANICAL EQUIPMENT WEIGHTS NOTED ON PLAN.
4. ALL OPENINGS IN METAL DECK GREATER THAN 10 INCHES IN ANY DIRECTION SHALL BE SUPPORTED ON ALL FOUR SIDES BY A STEEL FRAME SPANNING BETWEEN DECK SUPPORTS. RE: 8/S5.1 FOR TYPICAL FRAMING AT ROOF DECK OPENINGS.



MANSARD ROOF PLAN

1/8" = 1'-0"

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CONSULTANTS:

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PLAN NORTH

SCALE: 1/8" = 1'-0"

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Drawing Title: ROOF FRAMING PLAN

Approved: Project Director

Project Title: SURGERY RENOVATION AND EXPANSION

Location: CHEYENNE, WY

Date: 04/24/09 | Checked: LK | Drawn: CM

Project Number: VA-259-09-RA-209

Building Number: BLDG. NO. 1

Drawing Number: S1.2

Dwg. 4 of 7

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231

DESIGNERS:
DATE PRINTED: 4/24/2009 12:33:26 PM

MM JOB #: Project Number
PRINCIPAL/EOR:
PROJECT MANAGER:

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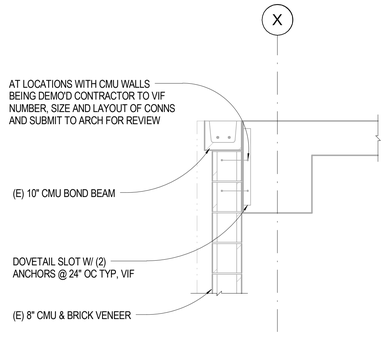
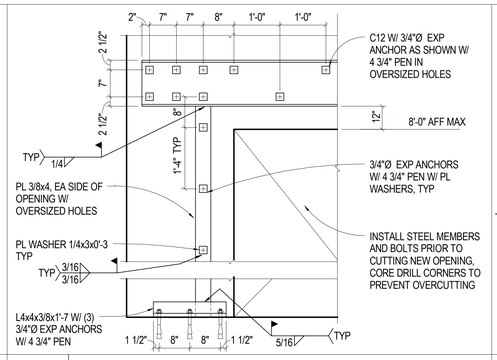
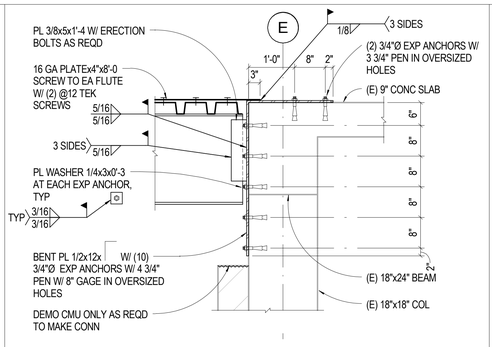


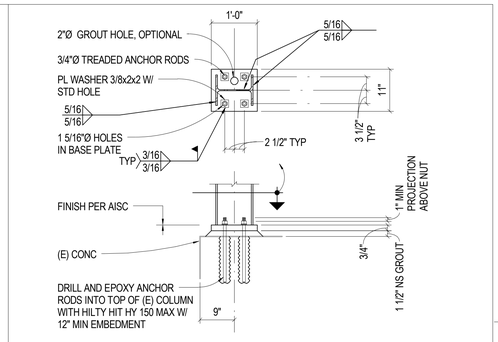
13 3/4" = 1'-0" (E) CMU CONN TO BUILDING



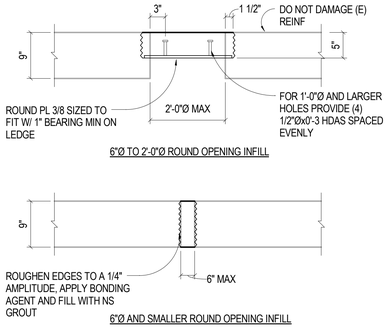
9 3/4" = 1'-0" DOOR OPENING REINFORCEMENT



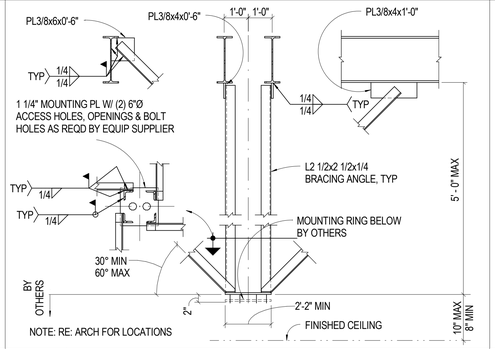
5 3/4" = 1'-0" BEAM CONN AT (E) COLUMN



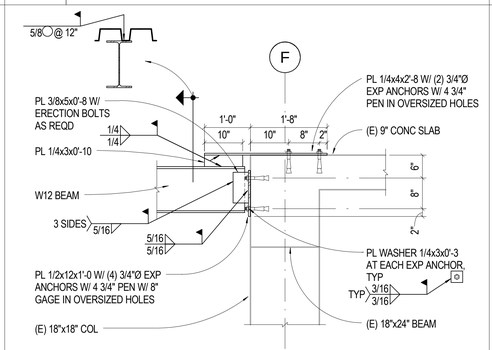
1 3/4" = 1'-0" TYP WF COL BASE PLATE - GRAVITY



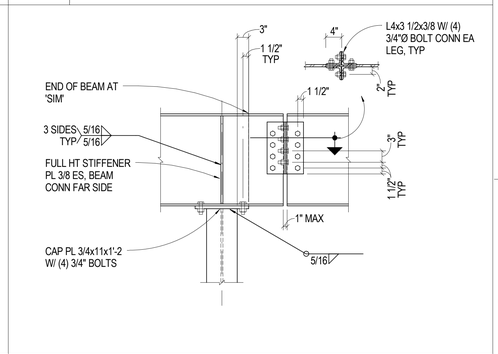
14 1" = 1'-0" (E) ROUND SLAB OPENING INFILL PHASE I&II



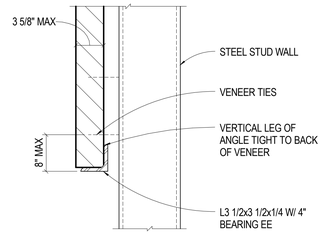
10 3/4" = 1'-0" TYP EQUIPMENT SUPPORT



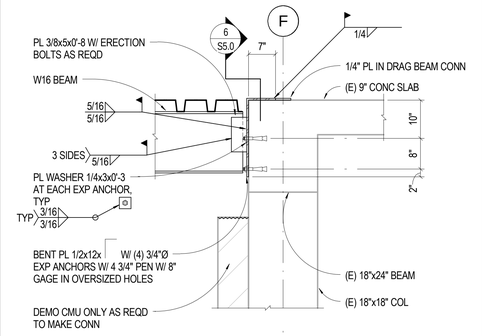
6 3/4" = 1'-0" DRAG BEAM CONN



2 3/4" = 1'-0" TYP BM OVER T/WF COLUMN

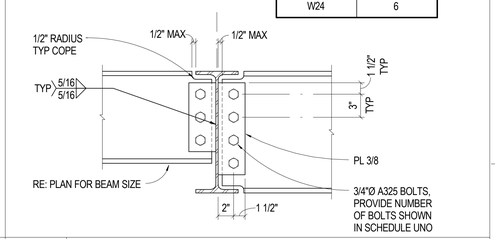


11 1 1/2" = 1'-0" TYP MAS VENEER LOOSE LINTEL

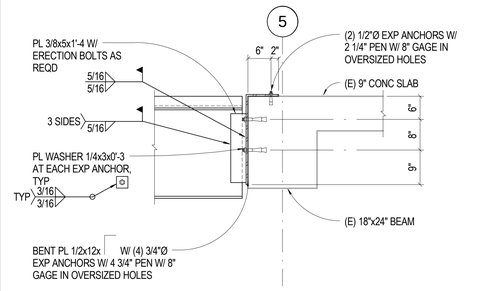


7 3/4" = 1'-0" W16 BEAM CONN AT (E) COLUMN

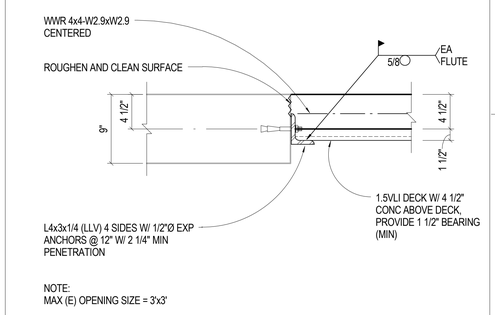
BEAM CONN SCHEDULE	
BEAM SIZE	# OF BOLTS
W12	2
W16	3
W24	6



3 1 1/2" = 1'-0" TYP SINGLE PL BEAM CONNS



8 3/4" = 1'-0" BEAM CONN AT (E) BEAM



4 1 1/2" = 1'-0" (E) SLAB OPENING INFILL PHASE I & II

Revisions:	Date

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PLAN NORTH

SCALE: 1/8" = 1'-0"

ARCHITECT/ENGINEERS:

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Drawing Title: STEEL DETAILS

Approved: Project Director

Project Title: SURGERY RENOVATION AND EXPANSION

Location: CHEYENNE, WY

Date: 04/24/09 | Checked: LK | Drawn: CM

Project Number: VA-259-09-RA-209

Building Number: BLDG. NO. 1

Drawing Number: S5.0

Dwg. 5 of 7

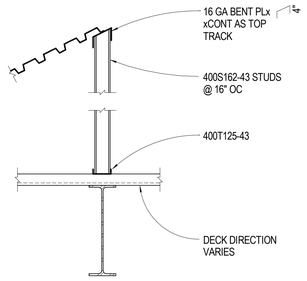
Office of Construction and Facilities Management

Department of Veterans Affairs

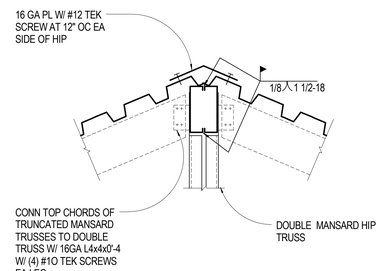
DESIGNERS:
DATE PRINTED: 4/24/2009 12:33:29 PM

MM JOB #: Project Number
PRINCIPAL/EOR:
PROJECT MANAGER:

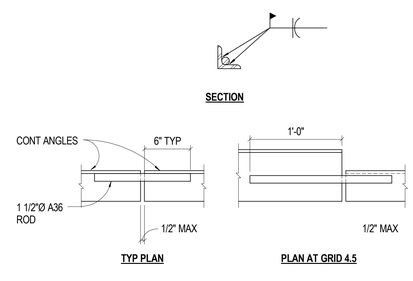
VA FORM 08-6231



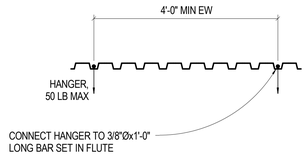
17 3/4" = 1'-0" BACK WALL OF MANSARD ROOF



13 1 1/2" = 1'-0" MANSARD HIP DECK CONN



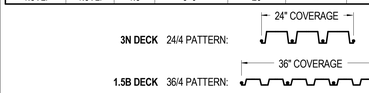
9 1 1/2" = 1'-0" TYP EDGE ANGLE CHORD SPLICE



5 3/4" = 1'-0" TYP ROOF DECK HANGERS

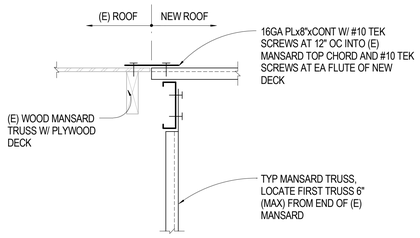
METAL DECK SLAB SCHEDULE

SLAB MARK	DECK TYPE	DECK DEPTH (IN)	MAX UNSHORED CLEAR SPAN	MIN DECK GAGE, 1-SPAN	MIN DECK GAGE, 2 SPAN OR MORE	MAX DECK CANTILEVER	DECK DIAPHRAGM SHEAR (PLF)
3N	3N	3	12'-0"	--	16	-	537
1.5B	1.5B	1.5	4'-0"	20	20	-	398
1.5VLI	1.5VLI	1.5	3'-0"	20	--	-	-

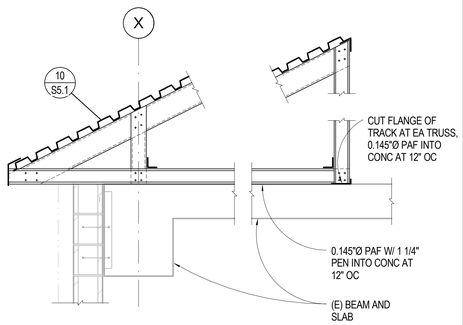


NOTES:
1. INSTALL DECK OVER 4 SUPPORTS (3 SPAN CONTINUOUS) WHERE POSSIBLE
4. NO TEMPORARY SHORING OF STEEL DECK PERMITTED WITHOUT PRIOR ACCEPTANCE OF THE ENGINEER
5. DECK CONNETCION SHALL BE AS FOLLOWS UNO:
   a. 5/8"Ø PUDDLE WELDS TO PERPENDICULAR SUPPORT MEMBERS PER PATTERN SHOWN ABOVE
   b. 5/8"Ø PUDDLE WELDS TO PARALLEL SUPPORT MEMBERS AT 12" OC
   c. #10 TEK SCREW SIDELAPS AT 12" OC

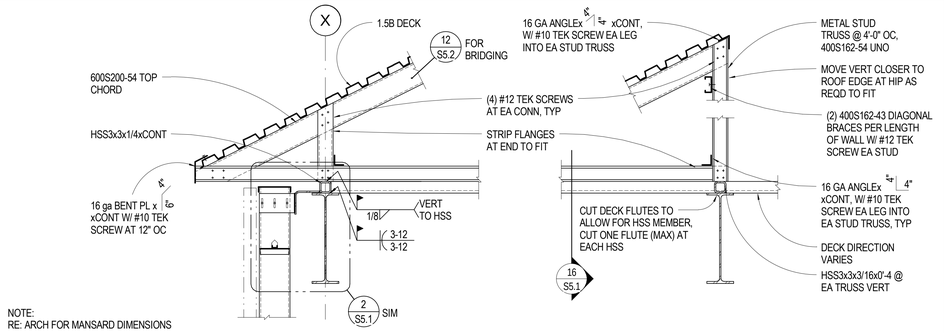
1 3/4" = 1'-0" METAL ROOF DECK



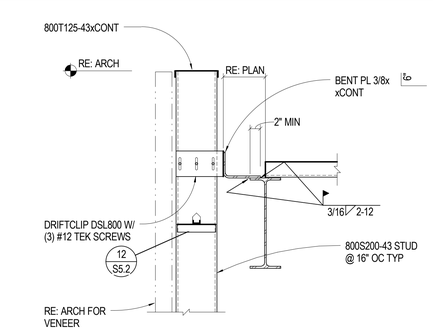
18 1 1/2" = 1'-0" (E) MANSARD ROOF EDGE



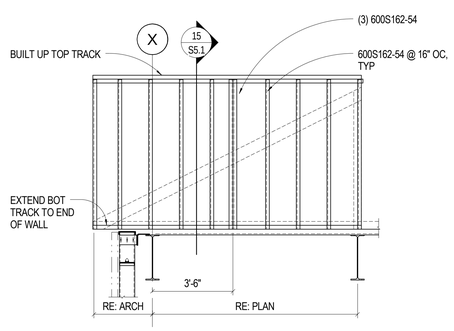
14 3/4" = 1'-0" MANSARD ROOF AT (E) BUILDING



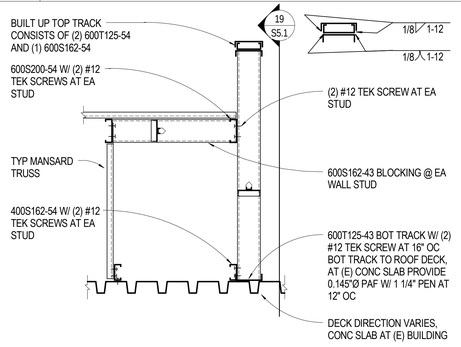
10 3/4" = 1'-0" MANSARD ROOF



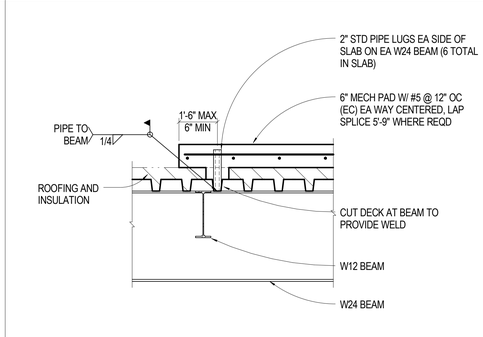
2 1" = 1'-0" TYP ROOF EDGE



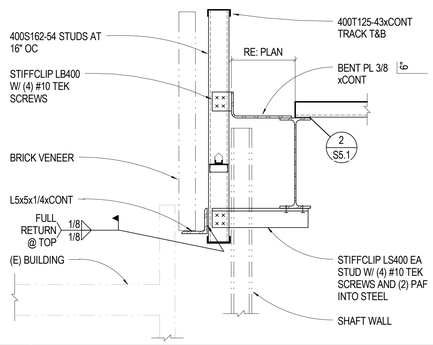
19 3/8" = 1'-0" MANSARD END WALL ELEVATION



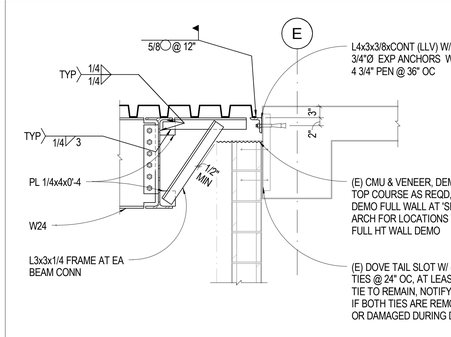
15 3/4" = 1'-0" MANSARD ROOF END



11 3/4" = 1'-0" MECHANICAL PAD

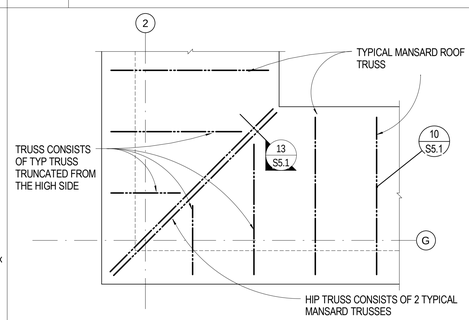


7 1" = 1'-0" ROOF EDGE @ (E) BUILDING

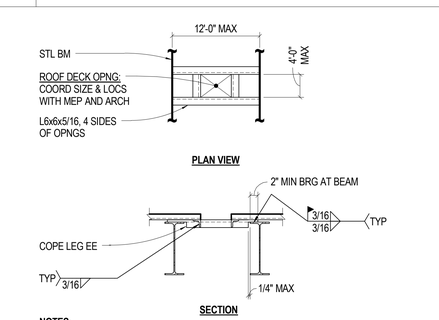


3 3/4" = 1'-0" ROOF DECK SUPPORT AT (E) BEAM

16 1 1/2" = 1'-0" MANSARD CONN TO ROOF DECK

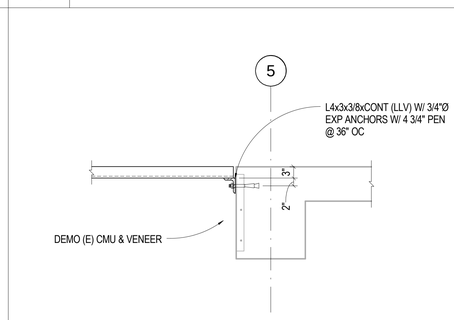


12 1/4" = 1'-0" MANSARD ROOF HIP



NOTES:
1. FRAME WILL SUPPORT THE WEIGHT OF A 500 LB MECH UNIT
2. FRAME NOT REQD FOR ROUND OPNGS THAT DO NOT CUT VERT LEG OF DECK

8 3/4" = 1'-0" TYP METAL DECK ROOF OPENING



4 3/4" = 1'-0" ROOF DECK SUPPORT AT (E) BEAM - 2

DESIGNERS:
DATE PRINTED: 4/24/2009 12:33:31 PM

MM JOB #: Project Number
PRINCIPAL/EOR:
PROJECT MANAGER:

Revisions:	Date

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PLAN NORTH

SCALE: 1/8" = 1'-0"

ARCHITECT/ENGINEERS:

HEERY design

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Drawing Title: MTL DECK DETAILS

Approved: Project Director

Project Title: SURGERY RENOVATION AND EXPANSION

Location: CHEYENNE, WY

Date: 04/24/09 | Checked: LK | Drawn: CM

Project Number: VA-259-09-RA-209

Building Number: BLDG. NO. 1

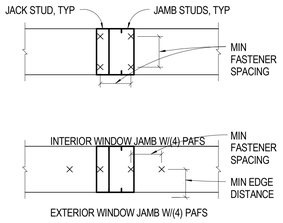
Drawing Number: S5.1

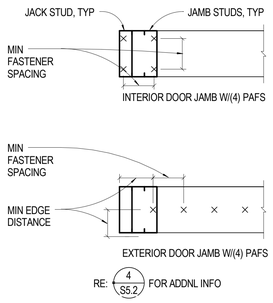
Dwg. 6 of 7

Office of Construction and Facilities Management

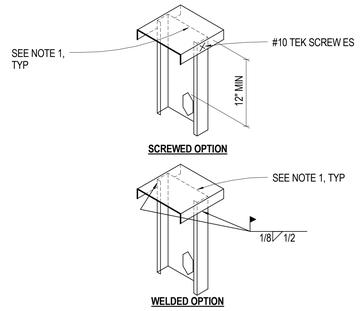
Department of Veterans Affairs

VA FORM 08-6231



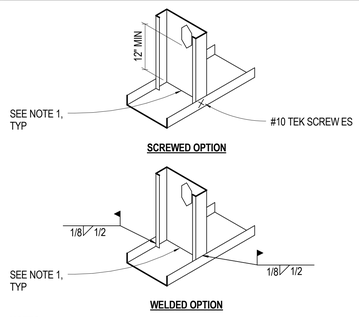


18 NO SCALE TYP CF BOTTOM TRACK TO CONCRETE AT JAMBS



NOTES:
1. 1/8" MAX GAP BTWN T/STUD AND TRACK

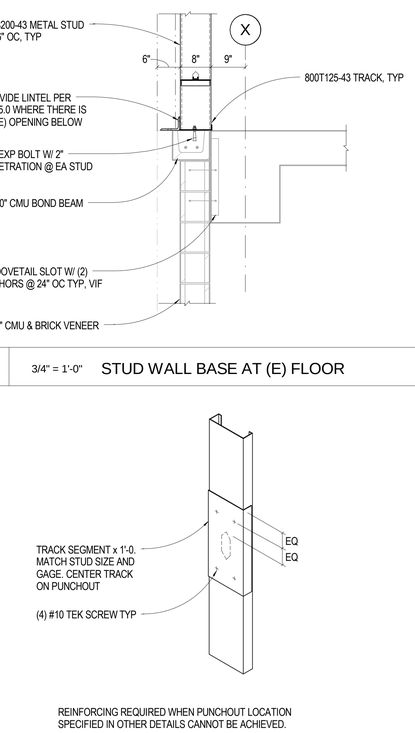
13 NO SCALE TYP CF STUD TO TOP TRACK



NOTES:
1. 1/8" MAX GAP BTWN B/STUD AND TRACK

14 NO SCALE TYP CF STUD TO BOTTOM TRACK

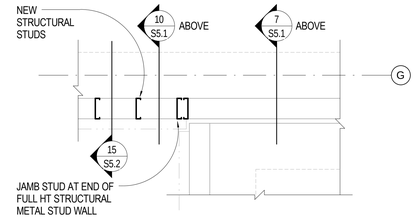
19 1" = 1'-0" ROOFING TRANSITION WALL



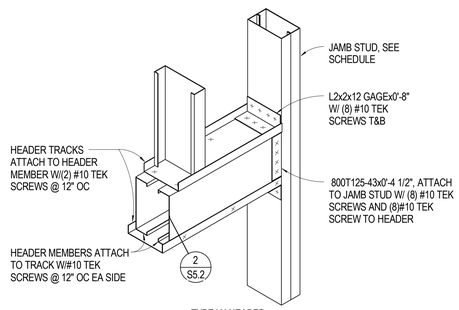
15 3/4" = 1'-0" STUD WALL BASE AT (E) FLOOR

REINFORCING REQUIRED WHEN PUNCHOUT LOCATION SPECIFIED IN OTHER DETAILS CANNOT BE ACHIEVED.

16 NO SCALE TYP CF PUNCHOUT REINFORCING

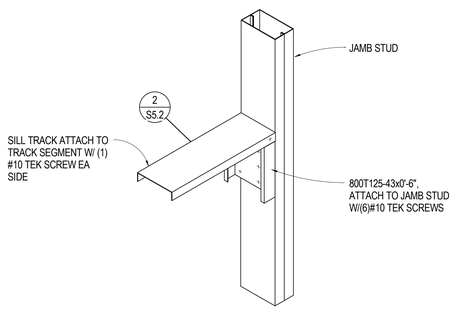


9 1/2" = 1'-0" METAL STUD WALL TRANSITION

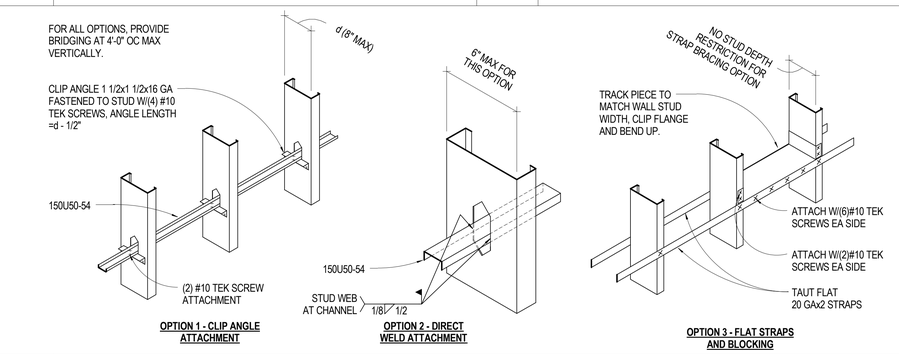


TYPE 'A' HEADER

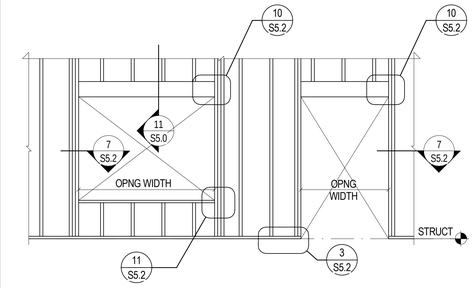
10 NO SCALE TYP CF HEADER



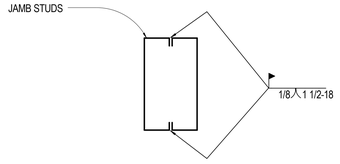
11 NO SCALE TYP CF SILL



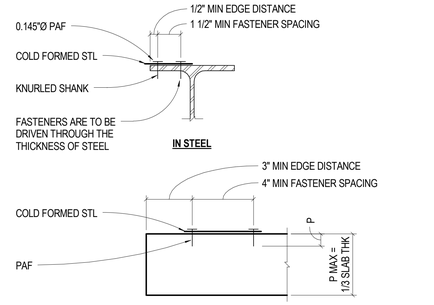
12 NO SCALE TYP CF WALL BRIDGING



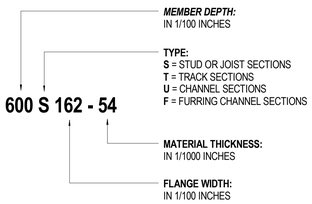
6 NO SCALE TYP CF OPENING FRAMING



7 NO SCALE TYP CF EXT STUD JAMB



5 NO SCALE TYP CF POWDER ACT FASTENER (PAF)



1 NO SCALE TYP CF ANNOTATION

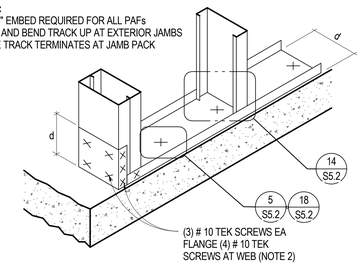
JAMB SCHEDULE	
MAX OPNG WIDTH	JAMB
5'-0"	(2) 800S162-54

HEADER AND SILL SCHEDULE		
MAX OPNG WIDTH	TYPICAL AREAS	
	HEADER	SILL
5'-0"	(2) 600S162-43 AND (2) 800T125-43	800T125-43

2 NO SCALE OPENING FRAMING SCHEDULES

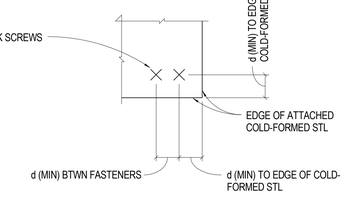
LOCATION	NUMBER OF FASTENERS REQUIRED
TYP FRAMING	(2) 0.145"Ø PAF @ 16" OC
JAMBS	(2) 0.145"Ø PAFs PER JAMB STUD

NOTES:
1. 1 1/4" EMBED REQUIRED FOR ALL PAFs
2. CUT AND BEND TRACK UP AT EXTERIOR JAMBS WHERE TRACK TERMINATES AT JAMB PACK



3 NO SCALE TYP CF BOTTOM TRACK TO CONC

TEK SCREW SIZE	d
#10	5/8"
#12	3/4"



NOTE - TEK SCREWS SHALL PENETRATE A MIN OF 3 THREADS PAST THE FINAL PLY

4 NO SCALE TYP CF TEK SCREW SPACING DETAIL

Revisions: | Date

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(303) 779-1222

PLAN NORTH

SCALE: 1/8" = 1'-0"

ARCHITECT/ENGINEERS:

HEERY design

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Drawing Title: MTL STUD DETAILS

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Project Title: SURGERY RENOVATION AND EXPANSION

Location: CHEYENNE, WY

Date: 04/24/09 | Checked: LK | Drawn: CM

Project Number: VA-259-09-RA-209

Building Number: BLDG. NO. 1

Drawing Number: S5.2

Dwg. 7 of 7

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231

DESIGNERS:
DATE PRINTED: 4/24/2009 12:33:34 PM

MM JOB #: Project Number
PRINCIPAL/EOR:
PROJECT MANAGER:

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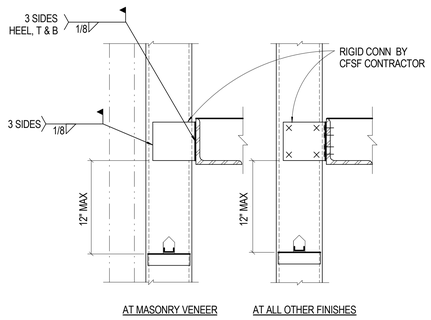
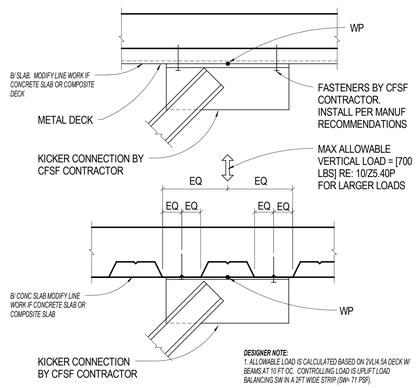
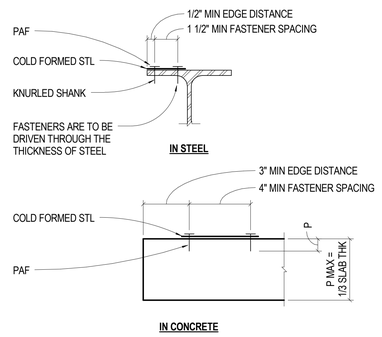


13 NO SCALE TYP CF-P METAL STUD RIGID CLIP CONN TO STRUCT STL



9 NO SCALE TYP CF-P KICKER TO MTL DECK-SLAB SMALL LOADS



5 NO SCALE TYP CF-P POWDER ACT FASTENER (PAF)

DESIGN CRITERIA FOR PERFORMANCE SPECIFIED COLD FORMED STEEL FRAMING (CFSF)

COLD FORMED METAL FRAMING USED FOR EXTERIOR CLADDING SUPPORT IS A PERFORMANCE SPECIFIED SYSTEM DESIGNED AND PROVIDED BY THE CONTRACTOR (CFSF CONTRACTOR). REFER TO SPECIFICATIONS FOR PROFESSIONAL ENGINEERING AND SUBMITTAL REQUIREMENTS. CONTRACTOR SHALL DESIGN ALL MEMBERS AND CONNECTIONS FORMING A COMPLETE SYSTEM FOR THE WIND FORCES INDICATED IN THE DESIGN CRITERIA SECTION. IN ADDITION TO THOSE FORCES THE FOLLOWING CONSTRAINTS SHALL BE MET:

1. FRAMING MEMBERS WILL BE THE DEPTH NOTED ON WALL SECTION ON THE ARCHITECTURAL DRAWINGS. CONTRACTOR WILL CONSIDER THE NEED FOR LARGER SIZES IN SOME AREAS WHEN PREPARING BIDS.

2. MINIMUM STUD THICKNESS BASED ON THE ATTACHMENT OF CLADDING MATERIAL IS GIVEN IN THE FOLLOWING TABLE:

MATERIAL ATTACHED TO STUDS	MIN. MIL THICKNESS	MAX. STUD SPACING
WELDED BRICK LEDGE	68	16" OC
BRICK BACKUP	43	16" OC
ALL OTHERS	33	24" OC

COLD FORMED STEEL TRACK THICKNESSES SHALL BE EQUAL TO OR GREATER THAN THE WALL STUDS ATTACHED TO IT.

DO NOT BASE BIDS ON THE ABOVE MINIMUM THICKNESSES. VARY THICKNESS, FLANGE WIDTH, YIELD STRESS, AND SPACING AS REQUIRED TO SATISFY PERFORMANCE CRITERIA.

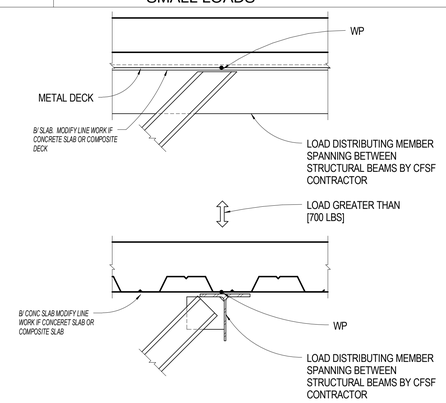
3. FRAMING MEMBERS WILL DELIVER FORCES TO THE STRUCTURAL FRAME AT THE LOCATIONS, DIRECTIONS, AND MAGNITUDES NOTED IN THE DETAILS. VARIATIONS PROPOSED BY THE CONTRACTOR/CFSF ENGINEER TO ACCOMMODATE PREFABRICATION AND ALTERNATE SCHEMES WILL BE SUBJECT TO THE EOR'S REVIEW.

4. LOADS:
-WIND LOADS GIVEN IN THESE DOCUMENTS ARE BASED ON A COMPONENT AND CLADDING TRIBUTARY AREA OF 10 SQUARE FEET. REDUCTION IN LOADS BASED ON TRIBUTARY AREA ARE ALLOWED AS PERMITTED IN THE GOVERNING BUILDING CODE.
-CFSF ENGINEER IS RESPONSIBLE FOR CALCULATING CUMULATIVE FORCES AT WINDOW JAMBS AND MULLIONS FROM DISTRIBUTED LOADS PROVIDED IN THESE DOCUMENTS'. COORDINATE MULLION AND JAMB LOCATIONS WITH THE GENERAL CONTRACTOR.
-CFSF CONTRACTOR SHALL ACCOUNT FOR ANY ECCENTRICITY AT CONNECTIONS OF WINDOW HEADER TRACK OR SILL PLATE WHICH COULD CAUSE ECCENTRIC LOADS ON COLD FORMED METAL FRAMING.

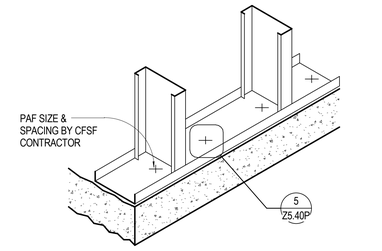
5. DEFLECTION CRITERIA
-MAX HORIZONTAL DEFLECTION:
FOR STUDS SUPPORTING METAL PANELS = SPAN/[240]
FOR STUDS SUPPORTING MASONRY VENEER = SPAN/[600]
FOR STUDS SUPPORTING STUCCO = SPAN/[600]
FOR STUDS SUPPORTING OTHER = SPAN/[240]
-PER IBC TABLE 1604.3 FOOTNOTE F, WIND LOAD IS PERMITTED TO BE TAKEN AS 0.7 TIMES THE COMPONENT AND CLADDING LOADS FOR THE PURPOSE OF DETERMINING DEFLECTION LIMITS EXCEPT AT COLDFORMED STEEL FRAMING SUPPORTING MASONRY VENEER.
- MAX VERTICAL LIVE LOAD DEFLECTION LIMITS USED IN DESIGN OF STRUCTURAL MEMBERS AT VERTICAL SLIP CONNECTIONS:
PERIMETER BEAMS AT STUD INFILL FRAMING= [3/8"]
PERIMETER BEAMS AT STUD BY-PASS FRAMING= [3/4"]
INTERIOR FRAMING = SPAN/ 360

6. ADDITIONAL CRITERIA FOR CFSF.
-PROVIDE DOUBLE JAMB STUDS MIN AT ALL OPENINGS.
-PROVIDE 1 ROW AT MID-HT (MIN) HORIZONTAL STUD BRIDGING.
-PROVIDE 1 STUD EA SIDE OF MASONRY CONTROL JOINTS RE: ARCH FOR LOCATIONS

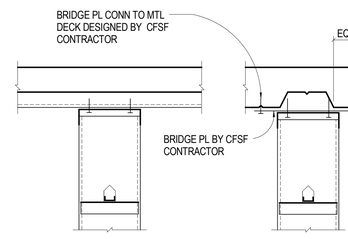
2 NO SCALE TYP CF-P NOTES



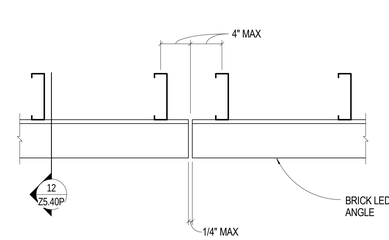
10 NO SCALE TYP CF-P KICKER TO MTL DECK-SLAB LARGE LOADS



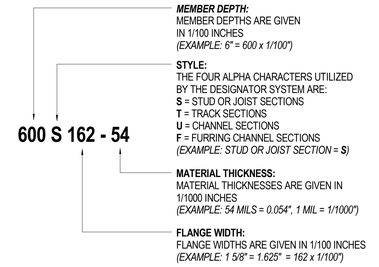
6 NO SCALE TYP CF-P BOTTOM TRACK TO CONC



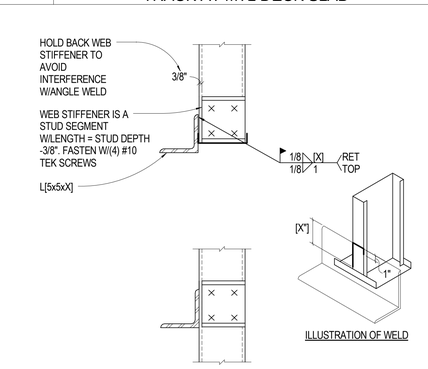
11 NO SCALE TYP CF-P METAL STUD DEFLECT TRACK AT MTL DECK SLAB



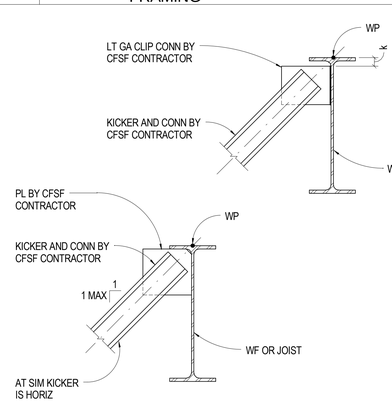
7 NO SCALE TYP CF-P CONSTRUCTION JOINT FRAMING



3 NO SCALE TYP CF-P ANNOTATION

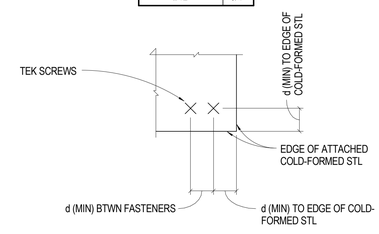


12 NO SCALE TYP CF-P WEB STIFFENER AT BL



8 NO SCALE TYP CF-P KICKER TO WF

TEK SCREW SIZE	d
#6, #8	1/2"
#10	5/8"
#12	3/4"



4 NO SCALE TYP CF-P TEK SCREW SPACING DETAIL

COMMENTARY

PERFORMANCE SPECIFIED COLD FORMED STEEL FRAMING (CFSF)

SHEET Z5.40P REPRESENTS TYPICAL DETAILS USED WITH PERFORM
COLD FORMED STEEL FRAMING. SOME OF THESE DETAILS ARE GE
NOT REFERENCED IN OTHER PLACES AND CAN TYPICALLY BE LEFT
OTHER DETAILS ARE CUT ON THE GENERAL ARRANGEMENT SHEETS
SHOULD BE EDITED TO REFLECT THE ACTUAL CONDITIONS FOR EA
PROJECT OR REMOVED IF IT DOES NOT APPLY.

DETAIL NOTES:

2. ALL OF THE GENERAL DESIGN CRITERIA REQUIRED TO DETAIL AN
CFSF SHOULD BE LISTED IN THIS DETAIL. DESIGN CRITERIA THAT W
THE GENERAL NOTES AND SPECIFICATIONS HAVE BEEN REMOVED
THEREFORE ONLY COVERED ON THIS SHEET.

3. GENERAL DETAIL INDICATING SSMA STANDARD NOMENCLATURE

4.GENERAL DETAIL SHOWING MINIMUM SPACING BETWEEN TEK SCR
REQUIRED BY CODE.

5.GENERAL DETAIL INDICATING EMBEDMENT DEPTH AND EDGE DIST
POWDER ACTUATED FASTENERS IN TO CONCRETE AND STEEL. MA
EMBEDMENT DEPTH COULD BE LESS THAN INDICATED FOR PT SLAB

6.GENERAL DETAIL INDICATING ATTACHMENT OF BASE TRACK TO C

7. MASONRY VENEER DETAIL AT A JOINT IN THE LEDGE ANGLE. DET
IF THERE IS MASONRY VENEER ON THE PROJECT.

8. TYPICAL DETAIL SHOWING CONNECTION INTENT OF A COLD FORM
TO AN ADJACENT BEAM. DETAIL MAINLY APPLIES TO PROJECTS WI
CFSF SYSTEMS WITH OR WITHOUT MASONRY VENEER.

9.TYPICAL DETAIL SHOWING CONNECTION INTENT OF A COLD FORM
TO UNDERSIDE OF A CONCRETE SLAB OR COMPOSITE METAL DECK
NOT APPLY TO BARE ROOF DECK. DETAIL MAINLY APPLIES TO PRO
SPANDREL CFSF SYSTEMS WITH OR WITHOUT MASONRY VENEER W
SPACED KICKERS (KICKERS AT EACH STUD) REMOVE METAL DECK
OF CONCRETE SLAB AS NEEDED.

10.TYPICAL DETAIL SHOWING CONNECTION INTENT OF A COLD FOR
KICKER TO UNDERSIDE OF A CONCRETE SLAB OR COMPOSITE MET
DOES NOT APPLY TO BARE ROOF DECK. DETAIL MAINLY APPLIES TO
SPANDREL CFSF SYSTEMS WITH OR WITHOUT MASONRY VENEER W
ALTERNATE STUDS. REMOVE METAL DECK LINE OR BOTTOM OF CO
NEEDED.

11.TYPICAL DETAIL SHOWING CONNECTION INTENT OF POWDER AC
FASTENERS TO THE UNDERSIDE OF COMPOSITE METAL DECK.

12. TYPICAL DETAIL SHOWING MINIMUM FASTENING REQUIREMENT
VENEER LEDGE ANGLES TO COLD FORMED STEEL FRAMING. DETAIL
TO PROJECTS WITH SPANDREL CFSF SYSTEMS. VERIFY THAT WELD
LENGTH IS SUFFICIENT TO SUPPORT APPLIED LOADS.

13. TYPICAL DETAIL SHOWING MINIMUM CONNECTION REQUIREMEN
EDGES SUPPORTING GRAVITY LOADS FROM CFSF.

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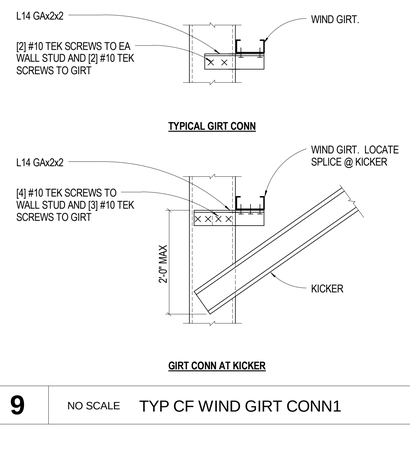
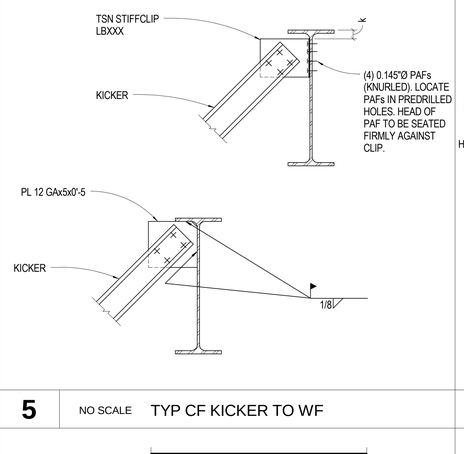
REFERENC DETAILS

SHEET TITLE:
TYP WALL STUD DETAILS

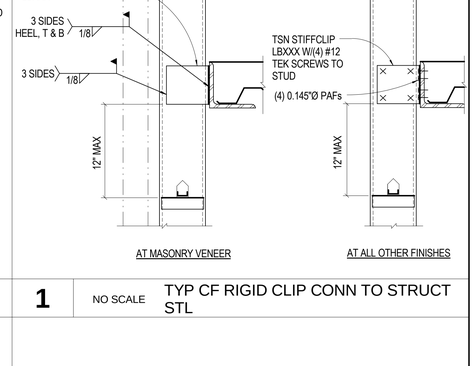
SHEET NUMBER:
Z5.40P



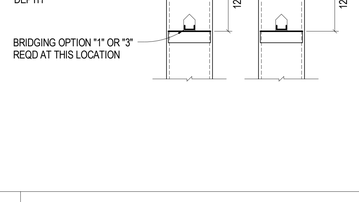
9 NO SCALE TYP CF WIND GIRT CONN1



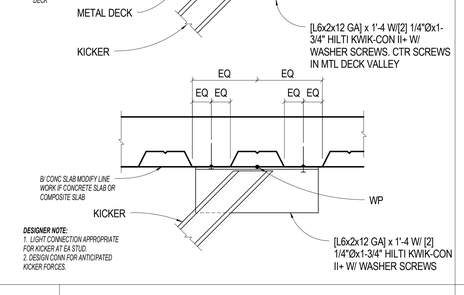
5 NO SCALE TYP CF KICKER TO WF



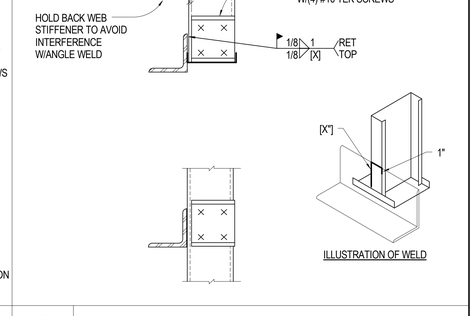
1 NO SCALE TYP CF RIGID CLIP CONN TO STRUCT STL



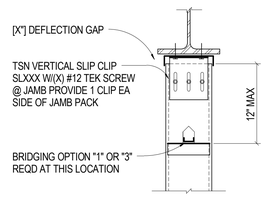
10 NO SCALE TYP CF VERT DEFLECTION CONN



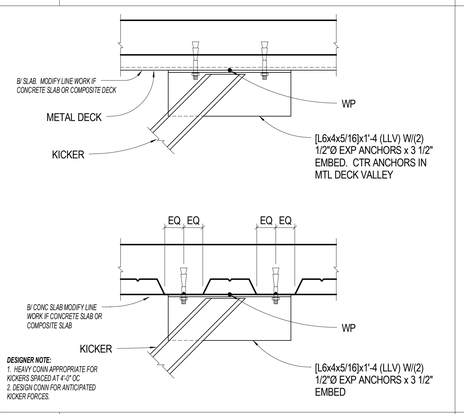
6 NO SCALE TYP CF KICKER TO CONC



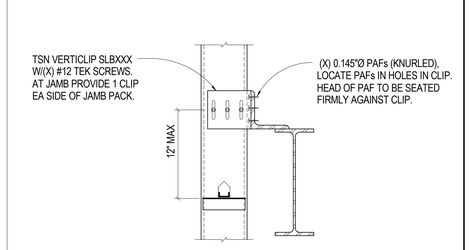
2 NO SCALE TYP CF WEB STIFFENER AT BL



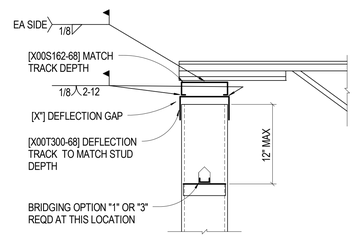
11 NO SCALE CF VERT DEFLECTION CONN LARGE LOAD



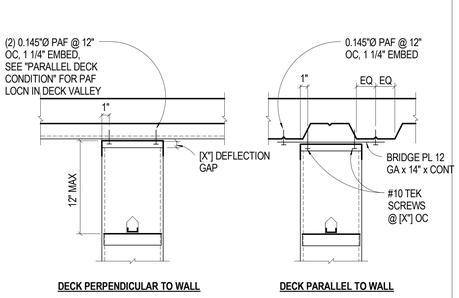
7 NO SCALE TYP CF KICKER TO SLAB ON MTL DECK



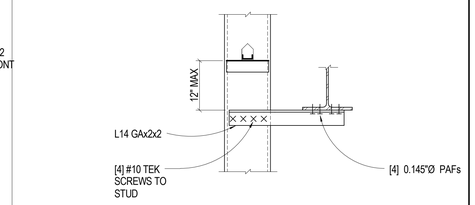
3 NO SCALE TYP CF BYPASS CONNECTION AT STL FRAMING



12 NO SCALE TYP CF VERT DEFLECTION CONN @ JST



8 NO SCALE TYP CF DEFL TRACK AT MTL DECK SLAB



4 NO SCALE TYP CF RIGID CONN TO BOTTOM FLANGE

COMMENTARY

FOR COLD FORMED STEEL FRAMING (CFSF) COMMENTARY FOR CO CLADDING FRAMING:

SHEET Z5.41 REPRESENTS TYPICAL DETAILS USED WITH COMPONEN CLADDING CFSF. SOME OF THESE DETAILS ARE GENERAL DETAILS REFERENCED IN OTHER PLACES AND CAN TYPICALLY BE LEFT WITH OTHER DETAILS ARE CUT ON THE GENERAL ARRANGEMENT SHEETS SHOULD BE EDITED TO REFLECT THE ACTUAL CONDITIONS IN EACH PROJECT OR REMOVED IF THEY DO NOT APPLY. ANNOTATION IN BR NEEDS TO BE REVIEWED AND DESIGN FOR THE SPECIFIC CONDITION CONDITIONS EXIST FOR THE SAME DETAIL THE INFORMATION CAN E SCHEDULED OR THE DETAIL COPIED TO REFLECT EACH CONDITION.

DETAIL NOTES:

1.TYPICAL DETAIL SHOWING CONNECTION REQUIREMENTS FOR GRA LOADED CLIPS WITH OR WITHOUT MASONRY VENEER. WELDED SIZE REVIEWED AND DESIGN IF NECESSARY. DETAIL MAINLY APPLIES TO SPANDREL CFSF SYSTEMS.

2. TYPICAL DETAIL SHOWING FASTENING REQUIREMENTS FOR MAS LEDGE ANGLES TO COLD FORMED STUD FRAMING. DETAIL MAINLY A PROJECTS WITH SPANDREL CFSF SYSTEMS.

3. TYPICAL DETAIL SHOWING SLIP CLIP CONNECTION TO SLAB/DECK NEED TO BE REVISED FOR THE SPECIFIC PROJECT TAKING INTO AC TO FLOOR HEIGHT AND STUD SIZE AND GAGE. DESIGN THE CLIP FO TYPICAL CONDITION AND ADJUST STUD SPACING AS NEEDED TO ME CAPACITY. THIS DETAIL MAY NEED TO BE DUPLICATED TO COVER AD CONDITIONS NOTE OFFICE STANDARD IS TO USE 'TSN' CLIPS WHICH STRONGER THAN DIETRICH CLIPS. THE CAPACITY OF THESE CLIPS A DEPENDENT ON THE GAGE OF THE CF STUD. SUBSTITUTIONS PROP CONTRACTOR IS ADDRESSED IN THE SPECIFICATIONS.

4.TYPICAL DETAIL SHOWING LATERAL CONNECTION OF STUD TO BO OF A BEAM. CONNECTION CAPACITY IS DEPENDENT ON THE STUD G AS THE BEAM FLANGE THICKNESS. THIS CONNECTION IS USUALLY SPANDREL CONDITIONS WHERE THE GRAVITY LOAD FROM THE CLAD SUPPORTED FROM THE SLAB EDGE. PROVIDE CONNECTION AT EACH THAT IT IS ACCEPTABLE TO BRACE TO THE BOTTOM FLANGE OF THE PROJECTION BELOW WF BECOMES TOO LARGE, USE A KICKER.

5. TYPICAL DETAIL SHOWING CONNECTION OF A CF STUD KICKER TO BEAM. DETAIL MAINLY APPLIES TO PROJECTS WITH SPANDREL FRA CONDITIONS WITH OR WITHOUT MASONRY VENEER. DESIGN CLIP AN TO BEAM FOR WORST CASE OR DUPLICATE DETAIL TO COVER OTHE THE CONNECTION FROM THE STUD TO THE CLIP SHOULD BE CALLED KICKER SIZE SINCE CONNECTION APPLIES EA END TYPICALLY.

6. TYPICAL DETAIL SHOWING CONNECTION OF A CF STUD KICKER TO A CONCRETE SLAB OR COMPOSITE METAL DECK. DETAIL DOES NOT ROOF DECK. DETAIL MAINLY APPLIES TO PROJECTS WITH SPANDRE SYSTEMS WITH OR WITHOUT MASONRY VENEER WITH CLOSELY SPA (KICKERS AT EACH STUD) REMOVE METAL DECK LINE OR BOTTOM C SLAB AS NEEDED.

7.TYPICAL DETAIL SHOWING CONNECTION CF STUD KICKER TO UND CONCRETE SLAB OR COMPOSITE METAL DECK. DETAIL DOES NOT A ROOF DECK. DETAIL MAINLY APPLIES TO PROJECTS WITH SPANDRE SYSTEMS WITH OR WITHOUT MASONRY VENEER WITH KICKERS AT A STUDS. REMOVE METAL DECK LINE OR BOTTOM OF CONCRETE SLA

8.TYPICAL DETAIL SHOWING CONNECTION OF SLIP TRACK TO THE U COMPOSITE METAL DECK USING POWDER ACTUATED FASTENERS . DEFLECTION GAP TO MIN L/360 DEFLECTION. DETAIL MAINLY APPLIE CONDITIONS WHEN THE FLOOR ABOVE EXTENDS OUT OVER THE FL CAUSING AN EXTERIOR STUD TO BE CONNECTED TO THE UNDERSID DECK. THIS DETAIL IS NOT INTENDED FOR INTERIOR ARCHITECTURA WALLS.

9. TYPICAL DETAIL SHOWING CONNECTION OF HORIZONTAL WIND G FRAMING. DETAIL APPLIES TYPICALLY AT CONDITIONS SIMILAR TO T DESCRIBED IN DETAIL 7 ABOVE. THIS USE USUALLY NEEDED WHERE TRACK OF THE STUD FRAMING IS MORE THAN 2 FT FROM THE KICKE POTENTIAL DIFFERENTIAL DEFLECTION BETWEEN VERTICAL STUDS.

10. TYPICAL DETAIL SHOWING CONNECTION OF VERTICAL SLIP TRAC UNDERSIDE OF STRUCTURE. IF TALL FLOOR TO FLOOR HEIGHTS OF WIND LOADS EXISTS ON THE PROJECT USE DETAIL 11 THIS SHEET. TRACK FLANGE = 2xGAP +1"

11. DETAIL SHOWING CONNECTION OF VERTICAL SLIP CONN TO THE STRUCTURE. APPLIES AT TALL FLOOR TO FLOOR HEIGHTS OR VERY LOADS EXISTS ON THE PROJECT. SUGGESTED TRACK FLANGE = 2x

12. SUGGESTED TRACK FLANGE = 2xGAP +1"

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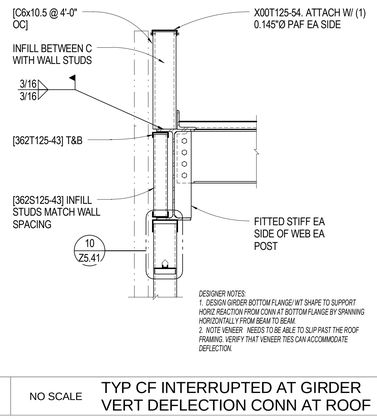
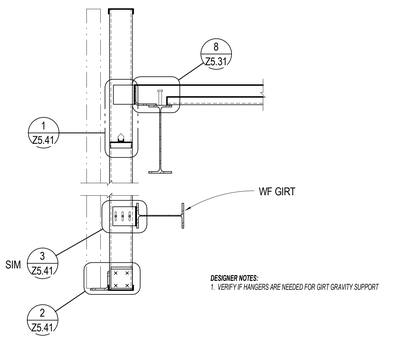
REFERENC DETAILS

SHEET TITLE:
TYP METAL STUD DETAILS

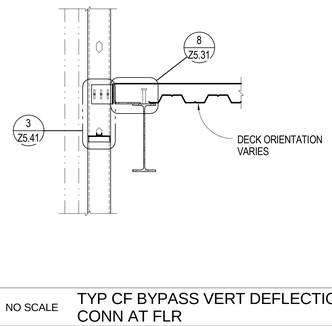
SHEET NUMBER:
Z5.41



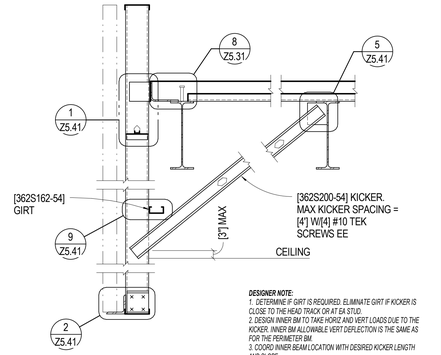
7 NO SCALE TYP CF INTERRUPTED AT GIRDER VERT DEFLECTION CONN AT ROOF



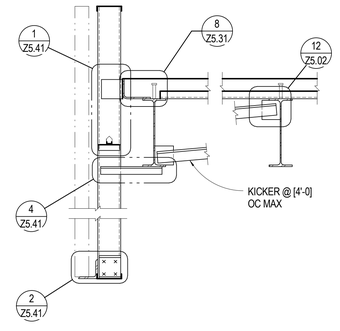
13 NO SCALE TYP CF SPANDREL W/GIRT AT FLR BM



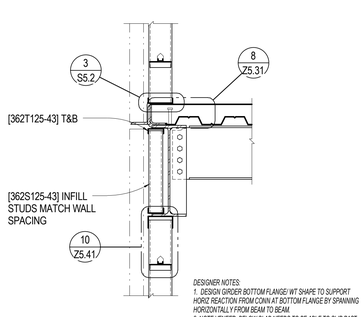
9 NO SCALE TYP CF BYPASS VERT DEFLECTION CONN AT FLR



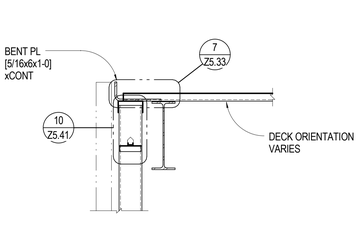
5 NO SCALE TYP CF SPANDREL W/KICKER AT FLR BM



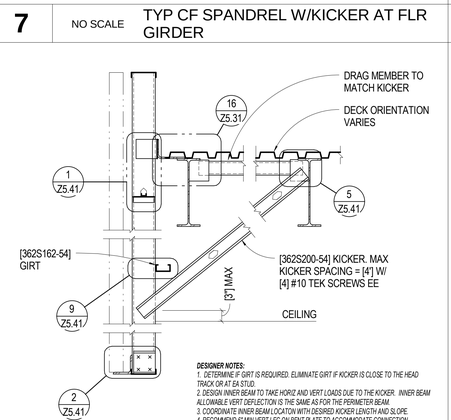
1 NO SCALE TYP CF SPANDREL AT FLR BM



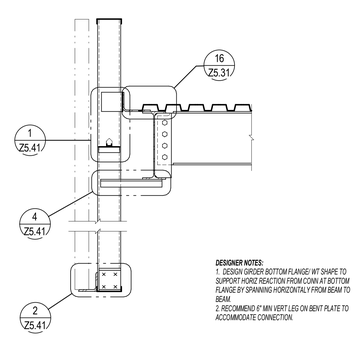
14 NO SCALE TYP CF INTERRUPTED AT BEAM VERT DEFLECTION CONN AT FLR



10 NO SCALE TYP CF BYPASS VERT DEFLECTION CONN AT ROOF

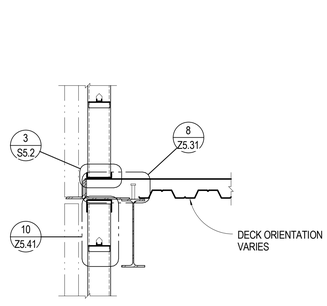


6 NO SCALE TYP CF SPANDREL W/KICKER AT ROOF BM

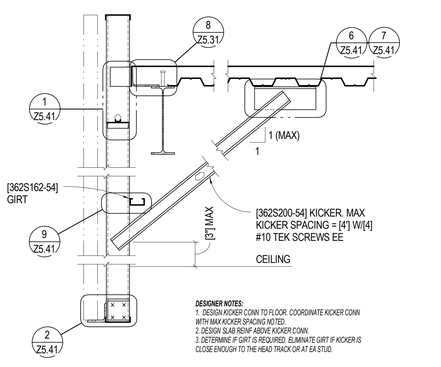


2 NO SCALE TYP CF SPANDREL AT ROOF BM

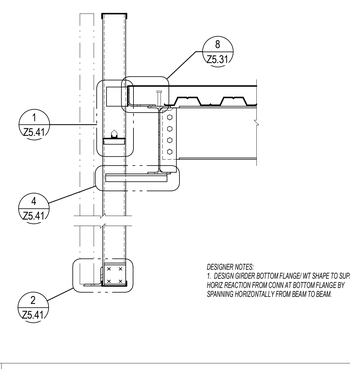
15 3/4" = 1'-0" TYP CF INTERRUPTED AT BEAM VERT DEFLECTION CONN AT ROOF



11 NO SCALE TYP CF INTERRUPTED VERT DEFLECTION CONN AT FLR



7 NO SCALE TYP CF SPANDREL W/KICKER AT FLR GIRDER



3 NO SCALE TYP CF SPANDREL AT FLR GIRDER

16 NO SCALE TYP CF INTERRUPTED AT GIRDER VERT DEFLECTION CONN AT FLR

12 NO SCALE TYP CF INTERRUPTED VERT DEFLECTION CONN AT RF

8 NO SCALE TYP CF SPANDREL W/KICKER AT ROOF GIRDER

4 NO SCALE TYP CF SPANDREL AT ROOF GIRDER

COMMENTARY

FOR DESIGNED COLD FORMED STEEL FRAMING (CFSF) GENERAL DETAILS SUPPORTED BY STRUCTURAL STEEL :

SHEET Z5.42A REPRESENTS TYPICAL DETAILS USED WITH COLD F FRAMING. THESE GENERAL ARRANGEMENT DETAILS ARE MEANT POINT FOR THE MOST COMMON EDGE CONDITIONS WHEN USING STEEL STUD SYSTEM FOR THE EXTERIOR CLADDING. THESE DET GENERAL GOOD PRACTICE AND MUST BE MODIFIED TO REPRESE GEOMETRY OF THE SPECIFIC PROJECT. THE INTENT IS TO SHOW THE EDGE CONDITION AND HAVE ALL SPECIFIC CF-TO-CF CONNE SHEETS Z5.40 AND Z5.41. THE STRUCTURAL EDGE CONDITIONS SI FROM SHEETS Z5.31. COMPLETED DETAILS ON THIS SHEET CAN I DIRECTLY ON FLOOR PLANS OR ON PARTIAL OR FULL HEIGHT WA

DETAIL NOTES:

1. CF STUD SPANDREL PANEL AT BEAM SUPPORTING COMPOSITE OR WITHOUT VENEER. USE THIS DETAIL IF THE STUD EXTENDS L DEPTHS BELOW TOP OF SLAB. DESIGN INNER BM TO TAKE HORIZ DUE TO THE KICKER. INNER BM ALLOWABLE VERT DEFLECTION IS THE PERIMETER BM. VERIFY KICKER LOAD IS LESS THAN 4 KIPS.
2. CF STUD SPANDREL PANEL AT BEAM SUPPORTING ROOF DECK VENEER. USE THIS DETAIL IF THE STUD EXTENDS LESS THAN [3] E BELOW TOP OF BEAM.
3. CF STUD SPANDREL PANEL AT GIRDER SUPPORTING COMPOSI WITH OR WITHOUT VENEER. USE THIS DETAIL IF THE STUD EXTEN BEAM DEPTHS BELOW TOP OF SLAB.
4. CF STUD SPANDREL PANEL AT GIRDER SUPPORTING ROOF DE WITHOUT VENEER. USE THIS DETAIL IF THE STUD EXTENDS LESS DEPTHS BELOW TOP OF GIRDER.
5. CF STUD SPANDREL PANEL AT BEAM SUPPORTING COMPOSITE OR WITHOUT VENEER. USE THIS DETAIL IF THE STUD EXTENDS M DEPTHS BELOW TOP OF SLAB.
6. CF STUD SPANDREL PANEL AT BEAM OR GIRDER SUPPORTING OR WITHOUT VENEER. USE THIS DETAIL IF THE STUD EXTENDS M DEPTHS BELOW TOP OF BEAM.
7. CF STUD SPANDREL PANEL AT GIRDER SUPPORTING COMPOSI OR WITHOUT VENEER. USE THIS DETAIL IF THE STUD EXTENDS M DEPTHS BELOW TOP OF SLAB.
8. CF STUD SPANDREL PANEL AT GIRDER SUPPORTING ROOF DEC WITHOUT VENEER. USE THIS DETAIL IF THE STUD EXTENDS MORE DEPTHS BELOW TOP OF SLAB.
9. CF WALL FRAMING BY-PASSING BEAM/GIRDER SUPPORTING CO FLOOR FRAMING SUPPORTS LATERAL LOADS ONLY. GRAVITY LO SUPPORTED EITHER AT FLOOR BELOW OR BY A GRADE BEAM.
10. CF WALL FRAMING BY-PASSING BEAM/GIRDER SUPPORTING R FRAMING SUPPORTS LATERAL LOADS ONLY. GRAVITY LOADS AR EITHER AT FLOOR BELOW OR BY A GRADE BEAM.
11. CF WALL INFILL FRAMING AT BEAM/GIRDER SUPPORTING CON THIS DETAIL REQUIRES A SLIP CONNECTION AT THE BOTTOM OF RELIEF ANGLE TO SUPPORT ANY VENEER AT THE SLAB EDGE. CO HORIZONTAL CONTROL JOINT WITH ARCH. IF THE CONTROL JOIN THE SLAB EDGE THIS CONDITION WILL REQUIRE A SPECIALTY DE
12. CF WALL INFILL FRAMING AT BEAM/GIRDER SUPPORTING ROO W/OUT VENEER. THIS DETAIL REQUIRES A SLIP CONNECTION AT T SLAB. DETAIL 10 IS PREFERRED TO THIS ONE IF POSSIBLE.
13. CF STUD SPANDREL PANEL AT BEAM SUPPORTING COMPOSIT OR WITHOUT VENEER. USE THIS DETAIL IF A KICKER IS NOT POSS HEIGHT OR LOADING.
14. CF STUD INTERRUPTED BY FLOOR PERIMETER BEAM SUPPOR DECK WITH OR WITHOUT VENEER. USE THIS DETAIL WHERE WALL ALIGNED WITH THE STRUCTURAL FRAMING.
15. CF STUD INTERRUPTED BY ROOF PERIMETER BEAM SUPPORT WITH OR WITHOUT VENEER. USE THIS DETAIL WHERE WALL STUD THE STRUCTURAL FRAMING.
16. CF STUD INTERRUPTED BY FLOOR GIRDER SUPPORTING COM OR WITHOUT VENEER. USE THIS DETAIL WHERE WALL STUDS ARE STRUCTURAL FRAMING.
17. CF STUD INTERRUPTED BY ROOF GIRDER SUPPORTING ROOF WITHOUT VENEER. USE THIS DETAIL WHERE WALL STUDS ARE AL STRUCTURAL FRAMING.

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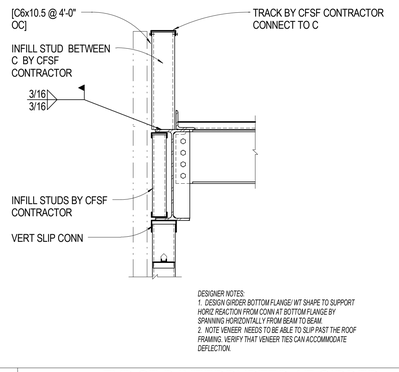
REFERENC DETAILS

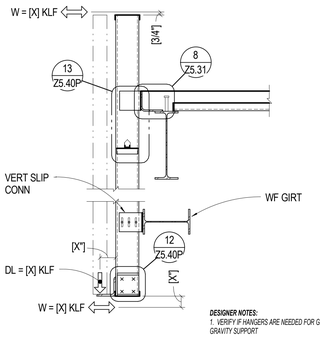
SHEET TITLE:
TYP ASSEMBLIES

SHEET NUMBER:
Z5.42A



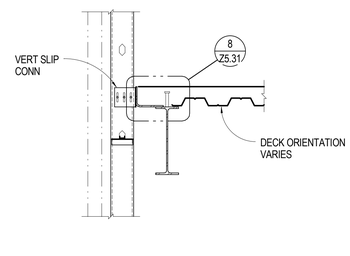
DESIGNER NOTES:
1. DESIGN GIRDER BOTTOM FLANGE/ WT SHAPE TO SUPPORT HORIZ REACTION FROM CONN AT BOTTOM FLANGE BY SPANNING HORIZONTALLY FROM BEAM TO BEAM.
2. NOTE VENEER NEEDS TO BE ABLE TO SLIP PAST THE ROOF FRAMING. VERIFY THAT VENEER TIES CAN ACCOMMODATE DEFLECTION.

7 NO SCALE TYP CF-P INTERRUPTED AT GIRDER VERT DEFLECTION CONN AT ROOF

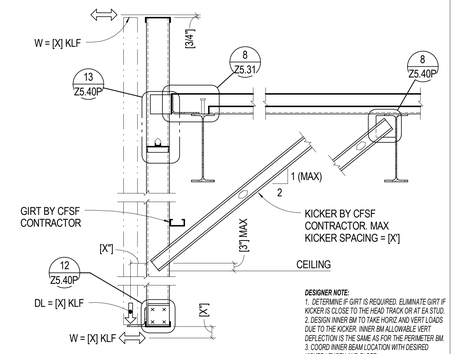


DESIGNER NOTES:
1. VERIFY IF HANGERS ARE NEEDED FOR GIRT GRAVITY SUPPORT.

13 NO SCALE TYP CF-P SPANDREL W/GIRT AT FLR BM

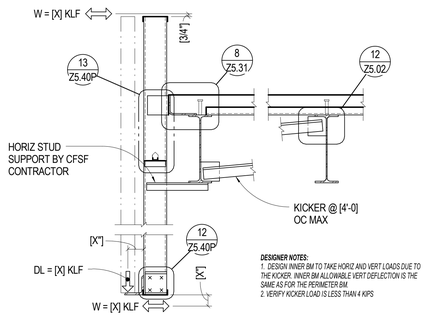


9 NO SCALE TYP CF-P BYPASS VERT DEFLECTION CONN AT FLR



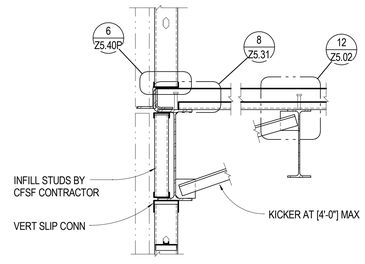
DESIGNER NOTE:
1. DETERMINE IF GIRT IS REQUIRED. ELIMINATE GIRT IF KICKER IS CLOSE TO THE HEAD TRACK OR AT EA STUD.
2. DESIGN INNER BM TO TAKE HORIZ AND VERT LOADS DUE TO THE KICKER. INNER BM ALLOWABLE VERT DEFLECTION IS THE SAME AS FOR THE PERIMETER BM.
3. COORD INNER BEAM LOCATION WITH DESIRED KICKER LENGTH AND SLOPE.

5 NO SCALE TYP CF-P SPANDREL W/KICKER AT FLR BM



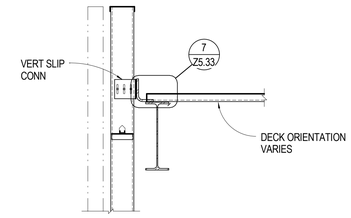
DESIGNER NOTES:
1. DESIGN INNER BM TO TAKE HORIZ AND VERT LOADS DUE TO THE KICKER. INNER BM ALLOWABLE VERT DEFLECTION IS THE SAME AS FOR THE PERIMETER BM.
2. VERIFY KICKER LOAD IS LESS THAN 4 KIPS

1 NO SCALE TYP CF-P SPANDREL AT FLR BM



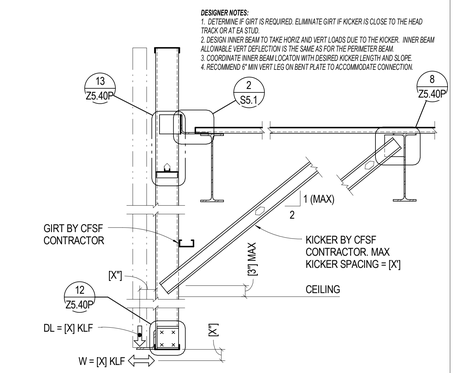
DESIGNER NOTES:
1. DESIGN INNER BM TO TAKE HORIZ AND VERT LOADS DUE TO THE KICKER. VERIFY KICKER LOAD IS LESS THAN 4 KIPS.
2. NOTE VENEER BELOW SLAB NEEDS TO BE ABLE TO SLIP PAST FRAMING. VERIFY THAT VENEER TIES CAN ACCOMMODATE DEFLECTION.
3. INNER BEAM ALLOWABLE VERT DEFLECTION IS THE SAME AS FOR THE PERIMETER BEAM.

14 NO SCALE TYP CF-P INTERRUPTED AT BEAM VERT DEFLECTION CONN AT FLR



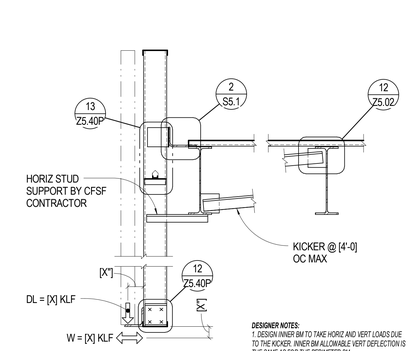
DESIGNER NOTES:
1. RECOMMEND 6" MIN VERT LEG ON BENT PLATE TO ACCOMMODATE CONNECTION.

10 NO SCALE TYP CF-P BYPASS VERT DEFLECTION CONN AT ROOF



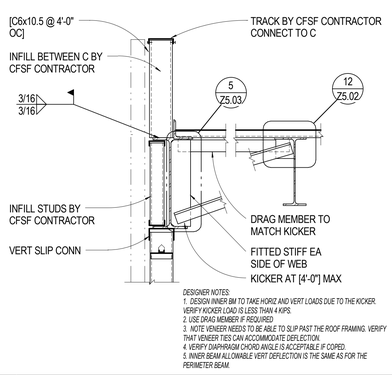
DESIGNER NOTES:
1. DETERMINE IF GIRT IS REQUIRED. ELIMINATE GIRT IF KICKER IS CLOSE TO THE HEAD TRACK OR AT EA STUD.
2. DESIGN INNER BEAM TO TAKE HORIZ AND VERT LOADS DUE TO THE KICKER. INNER BEAM ALLOWABLE VERT DEFLECTION IS THE SAME AS FOR THE PERIMETER BEAM.
3. COORDINATE INNER BEAM LOCATON WITH DESIRED KICKER LENGTH AND SLOPE.
4. RECOMMEND 6" MIN VERT LEG ON BENT PLATE TO ACCOMMODATE CONNECTION.

6 NO SCALE TYP CF-P SPANDREL W/KICKER AT ROOF BM



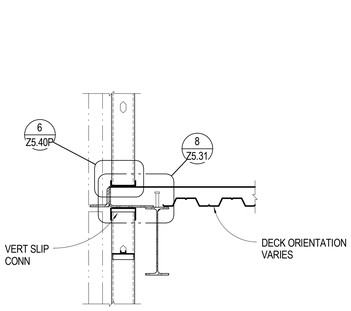
DESIGNER NOTES:
1. DESIGN INNER BM TO TAKE HORIZ AND VERT LOADS DUE TO THE KICKER. INNER BM ALLOWABLE VERT DEFLECTION IS THE SAME AS FOR THE PERIMETER BM.
2. RECOMMEND 9" MIN VERT LEG ON BENT PLATE TO ACCOMMODATE CONNECTION.
3. VERIFY KICKER LOAD IS LESS THAN 4 KIPS.

2 NO SCALE TYP CF-P SPANDREL AT ROOF BM

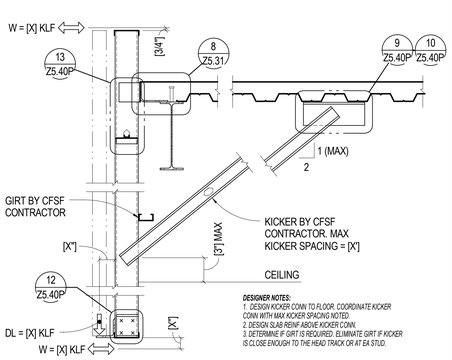


DESIGNER NOTES:
1. DESIGN INNER BM TO TAKE HORIZ AND VERT LOADS DUE TO THE KICKER. VERIFY KICKER LOAD IS LESS THAN 4 KIPS.
2. USE DRAG MEMBER IF REQUIRED.
3. NOTE VENEER NEEDS TO BE ABLE TO SLIP PAST THE ROOF FRAMING. VERIFY THAT VENEER TIES CAN ACCOMMODATE DEFLECTION.
4. VERIFY DIAPHRAGM CHORD ANGLE IS ACCEPTABLE IF COPED.
5. INNER BEAM ALLOWABLE VERT DEFLECTION IS THE SAME AS FOR THE PERIMETER BEAM.

15 NO SCALE TYP CF-P INTERRUPTED AT BEAM VERT DEFLECTION CONN AT ROOF

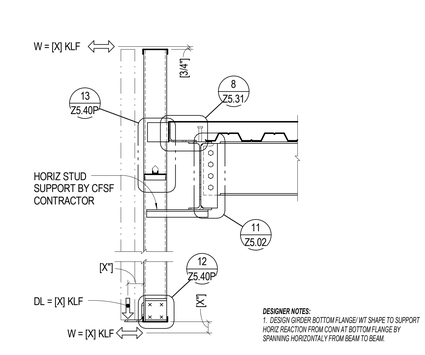


11 NO SCALE TYP CF-P INTERRUPTED VERT DEFLECTION CONN AT FLR



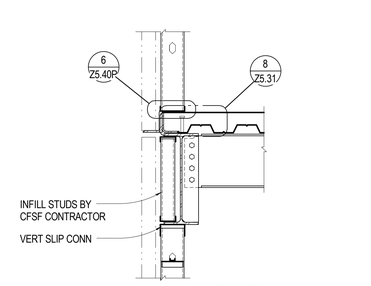
DESIGNER NOTES:
1. DESIGN KICKER CONN TO FLOOR. COORDINATE KICKER CONN WITH MAX KICKER SPACING NOTED.
2. DESIGN SLAB REINF ABOVE KICKER CONN.
3. DETERMINE IF GIRT IS REQUIRED. ELIMINATE GIRT IF KICKER IS CLOSE ENOUGH TO THE HEAD TRACK OR AT EA STUD.

7 NO SCALE TYP CF-P SPANDREL W/KICKER AT FLR GIRDER



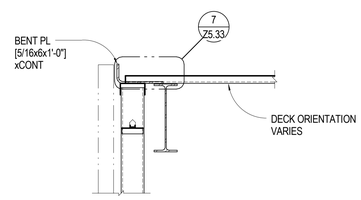
DESIGNER NOTES:
1. DESIGN GIRDER BOTTOM FLANGE/ WT SHAPE TO SUPPORT HORIZ REACTION FROM CONN AT BOTTOM FLANGE BY SPANNING HORIZONTALLY FROM BEAM TO BEAM.

3 NO SCALE TYP CF-P SPANDREL AT FLR GIRDER

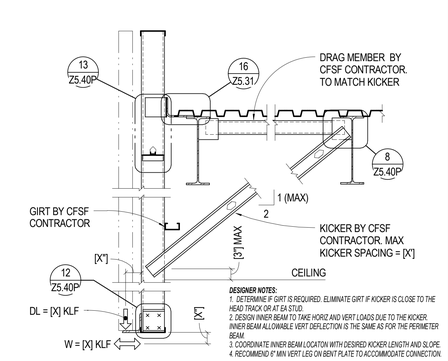


DESIGNER NOTES:
1. DESIGN GIRDER BOTTOM FLANGE/ WT SHAPE TO SUPPORT HORIZ REACTION FROM CONN AT BOTTOM FLANGE BY SPANNING HORIZONTALLY FROM BEAM TO BEAM.
2. NOTE VENEER BELOW SLAB NEEDS TO BE ABLE TO SLIP PAST FRAMING. VERIFY THAT VENEER TIES CAN ACCOMMODATE DEFLECTION.

16 NO SCALE TYP CF-P INTERRUPTED AT GIRDER VERT DEFLECTION CONN AT FLR

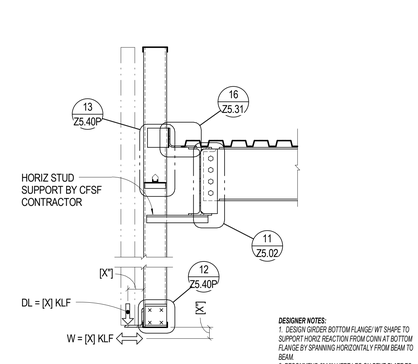


12 NO SCALE TYP CF-P INTERRUPTED VERT DEFLECTION CONN AT ROOF



DESIGNER NOTES:
1. DETERMINE IF GIRT IS REQUIRED. ELIMINATE GIRT IF KICKER IS CLOSE TO THE HEAD TRACK OR AT EA STUD.
2. DESIGN INNER BEAM TO TAKE HORIZ AND VERT LOADS DUE TO THE KICKER. INNER BEAM ALLOWABLE VERT DEFLECTION IS THE SAME AS FOR THE PERIMETER BEAM.
3. COORDINATE INNER BEAM LOCATON WITH DESIRED KICKER LENGTH AND SLOPE.
4. RECOMMEND 6" MIN VERT LEG ON BENT PLATE TO ACCOMMODATE CONNECTION.

8 NO SCALE TYP CF-P SPANDREL W/KICKER AT ROOF GIRDER



DESIGNER NOTES:
1. DESIGN GIRDER BOTTOM FLANGE/ WT SHAPE TO SUPPORT HORIZ REACTION FROM CONN AT BOTTOM FLANGE BY SPANNING HORIZONTALLY FROM BEAM TO BEAM.
2. RECOMMEND 6" MIN VERT LEG ON BENT PLATE TO ACCOMMODATE CONNECTION.

4 NO SCALE TYP CF-P SPANDREL AT ROOF GIRDER

COMMENTARY

PERFORMANCE SPECIFIED CO
STEEL FRAMING (CFSF) GENER
ARRANGEMENT DETAILS SUPP
STRUCTURAL STEEL :

SHEET Z5.42AP REPRESENTS T
USED WITH PERFORMANCE SP
STEEL FRAMING. THESE GENE
ARRANGEMENT DETAILS ARE N
STARTING POINT FOR THE MO
CONDITIONS WHEN USING A CO
STEEL STUD SYSTEM FOR THE
CLADDING. THESE DETAILS RE
GENERAL GOOD PRACTICE AN
MODIFIED TO REPRESENT THE
GEOMETRY OF THE SPECIFIC P
INTENT IS TO SHOW LOADING
VENEERS OR OTHER COMPONI
COLD FORMED FRAMING BUT N
ON CF -TO-CF CONNECTIONS C
WHAT IS SHOWN ON Z5.40P. D
THE STRUCTURAL EDGE COND
BE CUT FROM SHEETS Z5.31. C
DETAILS ON THIS SHEET CAN E
DIRECTLY ON FLOOR PLANS O
FULL HEIGHT WALL SECTIONS.

DETAIL NOTES:

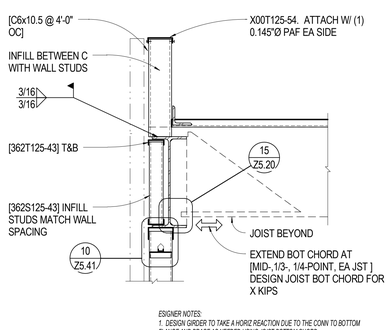
1. CF STUD SPANDREL PANEL A
SUPPORTING COMPOSITE FLO
WITHOUT VENEER. USE THIS D
STUD EXTENDS LESS THAN [3]
BELOW TOP OF SLAB.
2. CF STUD SPANDREL PANEL
SUPPORTING ROOF DECK WITH
VENEER . USE THIS DETAIL IF T
EXTENDS LESS THAN [3] BEAM
TOP OF BEAM.
3. CF STUD SPANDREL PANEL
SUPPORTING COMPOSITE FLO
WITHOUT VENEER. USE THIS D
EXTENDS LESS THAN [3] BEAM
TOP OF SLAB.
4. CF STUD SPANDREL PANEL
SUPPORTING ROOF DECK WITH
VENEER. USE THIS DETAIL IF T
EXTENDS LESS THAN [3] BEAM
TOP OF GIRDER.
5. CF STUD SPANDREL PANEL A
SUPPORTING COMPOSITE FLO
WITHOUT VENEER. USE THIS D
EXTENDS MORE THAN [3] BEA
TOP OF SLAB.
6. CF STUD SPANDREL PANEL
GIRDER SUPPORTING ROOF DE
WITHOUT VENEER. USE THIS D
EXTENDS MORE THAN [3] BEA
TOP OF BEAM.
7. CF STUD SPANDREL PANEL A
SUPPORTING COMPOSITE FLO
WITHOUT VENEER. USE THIS D
EXTENDS MORE THAN [3] BEAM
TOP OF SLAB.
8. CF STUD SPANDREL PANEL A
SUPPORTING ROOF DECK WITH
VENEER. USE THIS DETAIL IF A
EXTENDS MORE THAN [3] BEAM
TOP OF SLAB.
9. CF WALL FRAMING BY-PASS
SUPPORTING COMPOSITE SLAB
FRAMING SUPPORTS LATERAL
GRAVITY LOADS ARE SUPPORT
FLOOR BELOW OR ON GRADE.
10. CF WALL FRAMING BY-PASS
BEAM/GIRDER SUPPORTING RO
FRAMING SUPPORTS LATERAL
GRAVITY LOADS ARE SUPPORT
FLOOR BELOW OR ON GRADE.
11. CF WALL INFILL FRAMING A
SUPPORTING COMPOSITE SLAB
THIS DETAIL REQUIRES A SLIP
THE BOTTOM OF THE SLAB AN
TO SUPPORT ANY VENEER AT
COORDINATE HORIZONTAL CO
WITH ARCH. IF THE CONTROL
CLOSE TO THE SLAB EDGE THI
REQUIRE A SPECIALTY DETAIL
12. CF WALL INFILL FRAMING A
SUPPORTING ROOF DECK.
THIS DETAIL REQUIRES A SLIP
THE BOTTOM OF THE DECK. D
PREFERRED IF POSSIBLE
13. CF STUD SPANDREL PANEL
SUPPORTING COMPOSITE FLO
WITHOUT VENEER. USE THIS D
IS NOT POSSIBLE DUE TO CEIL
LOADING.
14. CF STUD INTERRUPTED BY
PERIMETER BEAM SUPPORTIN
DECK WITH OR WITHOUT VENE
DETAIL WHERE WALL STUDS AR
THE STRUCTURAL FRAMING.
15. CF STUD INTERRUPTED BY
PERIMETER BEAM SUPPORTIN
WITH OR WITHOUT VENEER. US
WHERE WALL STUDS ARE
STRUCTURAL FRAMING.
16. CF STUD INTERRUPTED BY
SUPPORTING ROOF DECK WITH
VENEER. USE THIS DETAIL WHE
ARE ALIGNED WITH THE STRUC

MARTIN|MARTIN
CONSULTING ENGINEERS

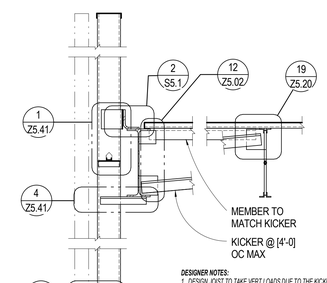
REFERENCE DETAILS

SHEET TITLE:
TYP PERF SPEC ASSEMBLIES

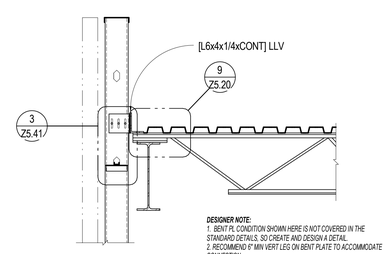
SHEET NUMBER:
Z5.42AP



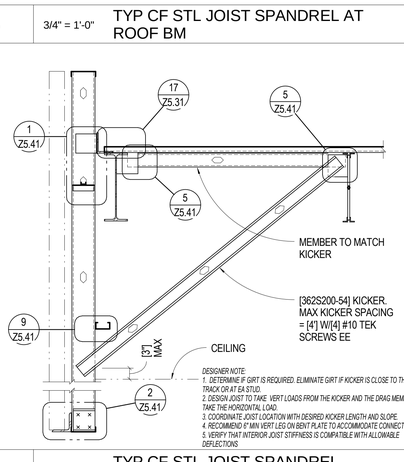
9 NO SCALE TYP CF STL JST INTERRUPTED AT GIRDER VERT DEFL CONN AT RF



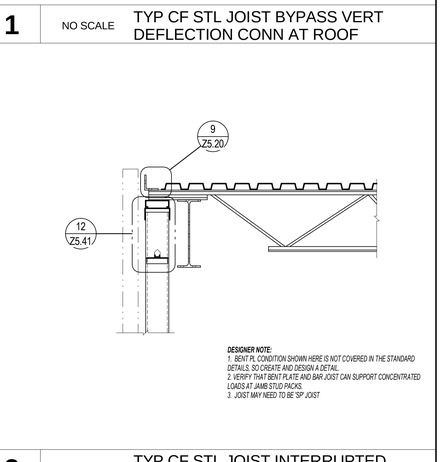
5 3/4" = 1'-0" TYP CF STL JOIST SPANDREL AT ROOF BM



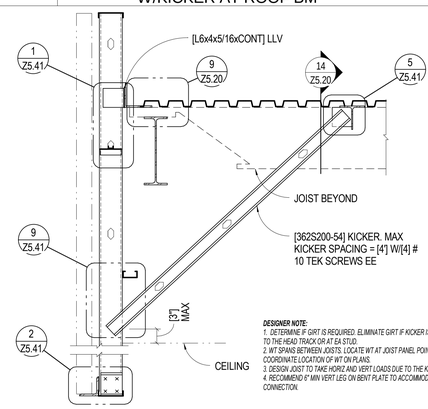
1 NO SCALE TYP CF STL JOIST BYPASS VERT DEFLECTION CONN AT ROOF



6 NO SCALE TYP CF STL JOIST SPANDREL W/KICKER AT ROOF BM



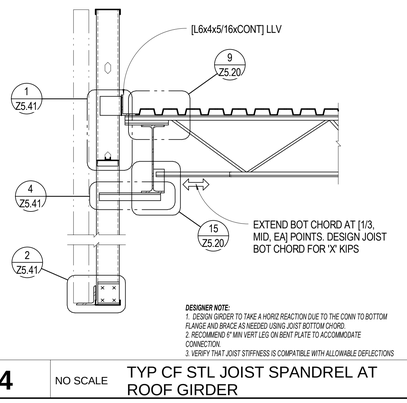
2 NO SCALE TYP CF STL JOIST INTERRUPTED VERT DEFLECTION CONN



7 NO SCALE TYP CF STL JOIST SPANDREL W/KICKER AT ROOF GIRDER

3 NO SCALE TYP CF STL JOIST INTERRUPTED VERT DEFL CONN AT BM

8 NO SCALE TYP CF STL JST INTERRUPTED AT BEAM VERT DEFL CONN AT ROOF



4 NO SCALE TYP CF STL JOIST SPANDREL AT ROOF GIRDER

COMMENTARY

FOR DESIGNED COLD FORMED (CFSF) GENERAL ARRANGEME SUPPORTED BY BAR JOIST FR

SHEET Z5.42B REPRESENTS TY USED WITH COLD FORMED STE THESE GENERAL ARRANGEME MEANT TO BE A STARTING POI COMMON EDGE CONDITIONS W COLD FORMED STEEL STUD SY EXTERIOR CLADDING. THESE I REPRESENT GENERAL GOOD P MUST BE MODIFIED TO REPRES GEOMETRY OF THE SPECIFIC P INTENT IS TO SHOW THE GEOM EDGE CONDITION AND HAVE A TO-CF CONNECTIONS DETAILE Z5.40 AND Z5.41. THE STRUCTU CONDITIONS SHOULD BE CUT F Z5.20 AND Z5.31. COMPLETED SHEET CAN EITHER BE CUT DI PLANS OR ON PARTIAL OR FUL SECTIONS.

DETAIL NOTES:

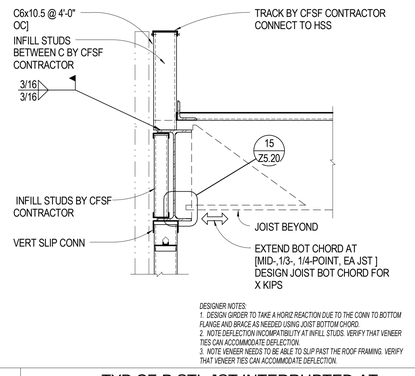
1. CF STUD BY-PASS AT BAR JO ROOF DECK WITH OR WITHOUT THIS DETAIL AT PARAPET CONN YOU CAN RUN THE STUDS PAS ON THE OUTSIDE AND YOUR T IN THE WALL ARE PUNCHED.
2. CF STUD INTERRUPTED BY B FRAMING AT BAR JOIST SUPPO DECK WITH OR WITHOUT VENE DETAIL WHERE NO PARAPET IS
3. CF STUD INTERRUPTED BY B FRAMING PARALLEL TO BAR JO ROOF DECK WITH OR WITHOUT THIS DETAIL WHERE NO PARAP
4. CF STUD SPANDREL PANEL SUPPORTING ROOF DECK WITH VENEER. USE THIS DETAIL IF T LESS THAN [3] BEAM DEPTHS B GIRDER.
5. CF STUD SPANDREL PANEL PARALLEL TO BAR JOIST SUPP DECK WITH OR WITHOUT VENE DETAIL IF THE STUD EXTENDS BEAM DEPTHS BELOW TOP OF
6. CF STUD SPANDREL PANEL SUPPORTING ROOF DECK PAR JOIST WITH OR WITHOUT VENE DETAIL IF THE STUD EXTENDS BEAM DEPTHS BELOW TOP OF
7. CF STUD SPANDREL PANEL SUPPORTING ROOF DECK WITH VENEER. USE THIS DETAIL IF T MORE THAN [3] BEAM DEPTHS SLAB.
8. CF STUD INTERRUPTED BY B BEAM PARALLEL TO BAR JOIST ROOF DECK WITH OR WITHOUT THIS DETAIL WHERE WALL STU WITH THE STRUCTURAL FRAMI
9. CF STUD INTERRUPTED BY B SUPPORTING BAR JOIST SUPP DECK WITH OR WITHOUT VENE DETAIL WHERE WALL STUDS A THE STRUCTURAL FRAMING.

MARTIN/MA
CONSULTING ENG
12499 West Colfa
P.O. Box 151500
Lakewood, Colorad
303.431.6100
fax 303.431.6866

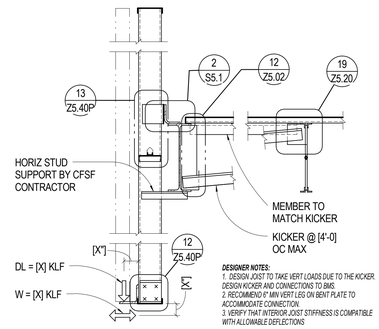
REFERENC DETAILS

SHEET TITLE:
TYP ASSEMBLIES

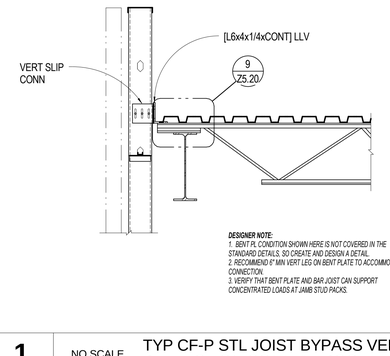
SHEET NUMBER:
Z5.42B



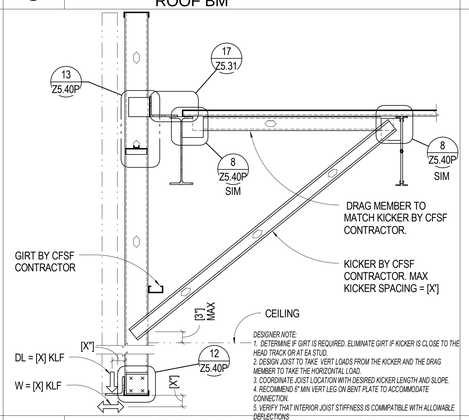
9 NO SCALE TYP CF-P STL JST INTERRUPTED AT GIRDER VERT DEFL CONN AT ROOF



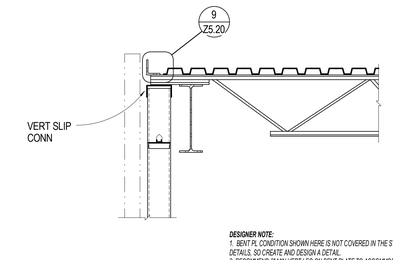
5 NO SCALE TYP CF-P STL JOIST SPANDREL AT ROOF BM



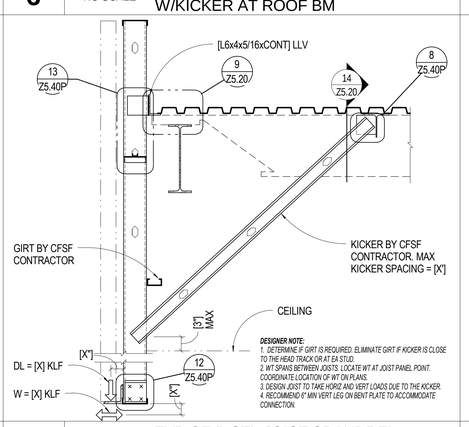
1 NO SCALE TYP CF-P STL JOIST BYPASS VERT DEFLECTION CONN AT ROOF



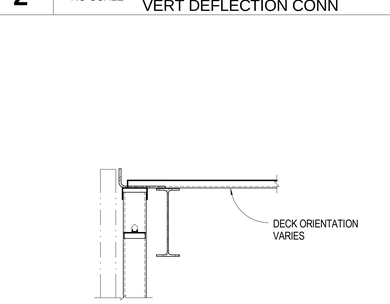
6 NO SCALE TYP CF-P STL JOIST SPANDREL W/KICKER AT ROOF BM



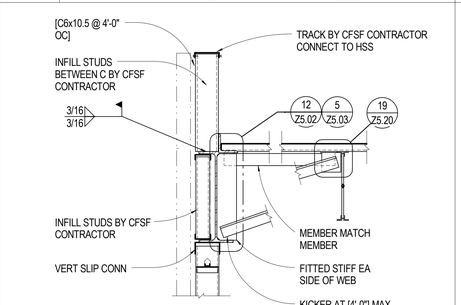
2 NO SCALE TYP CF-P STL JOIST INTERRUPTED VERT DEFLECTION CONN



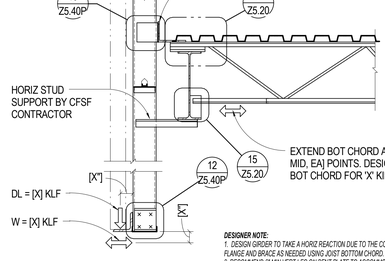
7 NO SCALE TYP CF-P STL JOIST SPANDREL W/KICKER AT ROOF GIRDER



3 NO SCALE TYP CF-P STL JOIST INTERRUPTED VERT DEFL CONN AT BM



8 NO SCALE TYP CF-P STL JST INTERRUPTED AT BEAM VERT DEFL CONN AT ROOF



4 NO SCALE TYP CF-P STL JOIST SPANDREL AT ROOF GIRDER

COMMENTARY

PERFORMANCE SPECIFIED CO
FRAMING (CFSF) GENERAL AR
DETAILS SUPPORTED BY BAR

SHEET Z5.42BP REPRESENTS T
USED WITH COLD FORMED STE
THESE GENERAL ARRANGEME
MEANT TO BE A STARTING POI
COMMON EDGE CONDITIONS W
COLD FORMED STEEL STUD SY
EXTERIOR CLADDING. THESE
REPRESENT GENERAL GOOD P
MUST BE MODIFIED TO REPRES
GEOMETRY OF THE SPECIFIC P
INTENT IS TO SHOW THE GEOM
EDGE CONDITION AND HAVE A
CF CONNECTIONS DETAILED O
THE STRUCTURAL EDGE COND
CUT FROM SHEETS Z5.20 AND
DETAILS ON THIS SHEET CAN B
DIRECTLY ON FLOOR PLANS O
FULL HEIGHT WALL SECTIONS.

DETAIL NOTES:

1. CF STUD BY-PASS AT BAR JO
ROOF DECK WITH OR WITHOUT
THIS DETAIL AT PARAPET CONI
CAN RUN THE STUDS PAST THE
OUTSIDE AND YOUR TYPICAL C
WALL ARE PUNCHED.
2. CF STUD INTERRUPTED BY I
FRAMING AT BAR JOIST SUPPO
WITH OR WITHOUT VENEER. US
WHERE NO PARAPET IS REQUI
COULD ALSO BE USED AT LOCA
JOIST EXTENSIONS EXTENDING
WHICH CASE THE TRACK EITHE
ABLE TO SPAN FROM JOIST TO
A HEADER MEMBER.
3. CF STUD INTERRUPTED BY I
FRAMING PARALLEL TO BAR JO
ROOF DECK WITH OR WITHOUT
THIS DETAIL WHERE NO PARAP
4. CF STUD SPANDREL PANEL
SUPPORTING ROOF DECK WITH
VENEER. USE THIS DETAIL IF T
LESS THAN [3] BEAM DEPTHS B
GIRDER.
5. CF STUD SPANDREL PANEL
SUPPORTING ROOF DECK PAR
JOIST WITH OR WITHOUT VENE
DETAIL IF THE STUD EXTENDS
BEAM DEPTHS BELOW TOP OF
6. CF STUD SPANDREL PANEL
SUPPORTING ROOF DECK WITH
VENEER. USE THIS DETAIL IF T
MORE THAN [3] BEAM DEPTHS
SLAB.
7. CF STUD SPANDREL PANEL
SUPPORTING ROOF DECK WITH
VENEER. USE THIS DETAIL IF T
MORE THAN [3] BEAM DEPTHS
SLAB.
8. CF STUD INTERRUPTED BY I
BEAM PARALLEL TO BAR JOIST
ROOF DECK WITH OR WITHOUT
THIS DETAIL WHERE WALL STU
WITH THE STRUCTURAL FRAMI
9. CF STUD INTERRUPTED BY I
SUPPORTING BAR JOIST SUPP
DECK WITH OR WITHOUT VENE
DETAIL WHERE WALL STUDS A
THE STRUCTURAL FRAMING.

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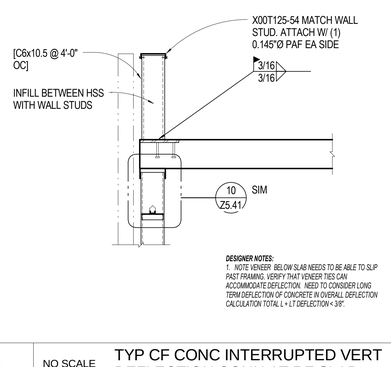
REFERENC DETAILS

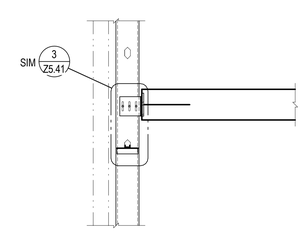
SHEET TITLE:
TYP PERF SPEC ASSEMBLIES

SHEET NUMBER:
Z5.42BP

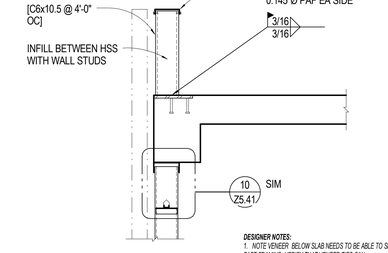


DESIGNER NOTES:
1. NOTE VENEER BELOW SLAB NEEDS TO BE ABLE TO SLIP PAST FRAMING. VERIFY THAT VENEER TIES CAN ACCOMMODATE DEFLECTION. NEED TO CONSIDER LONG TERM DEFLECTION OF CONCRETE IN OVERALL DEFLECTION CALCULATION TOTAL L + LT DEFLECTION < 3/8".

5 NO SCALE TYP CF CONC INTERRUPTED VERT DEFLECTION CONN AT RF SLAB

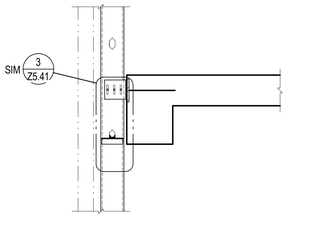


1 NO SCALE TYP CF CONC BYPASS VERT DEFLECTION CONN AT SLAB

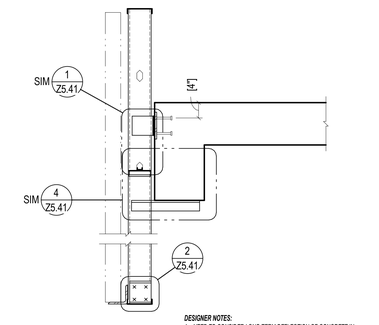


DESIGNER NOTES:
1. NOTE VENEER BELOW SLAB NEEDS TO BE ABLE TO SLIP PAST FRAMING. VERIFY THAT VENEER TIES CAN ACCOMMODATE DEFLECTION. NEED TO CONSIDER LONG TERM DEFLECTION OF CONCRETE IN OVERALL DEFLECTION CALCULATION TOTAL L + LT DEFLECTION < 3/8".

6 NO SCALE TYP CF CONC INTERRUPTED VERT DEFLECTION CONN AT RF BEAM

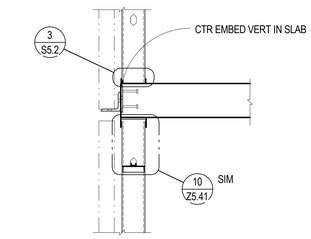


2 NO SCALE TYP CF CONC BYPASS VERT DEFLECTION CONN AT BEAM



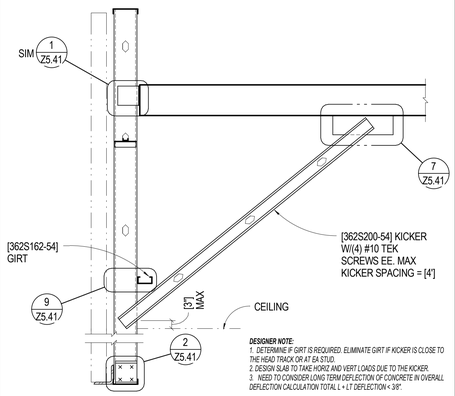
DESIGNER NOTES:
1. NEED TO CONSIDER LONG TERM DEFLECTION OF CONCRETE IN OVERALL DEFLECTION CALCULATION TOTAL L + LT DEFLECTION < 3/8".

7 NO SCALE TYP CF CONC SPANDREL



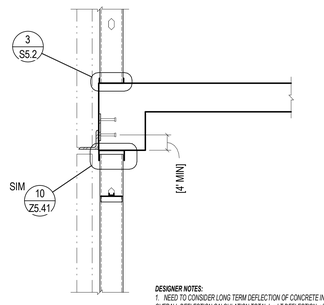
DESIGNER NOTES:
1. NEED TO CONSIDER LONG TERM DEFLECTION OF CONCRETE IN OVERALL DEFLECTION CALCULATION TOTAL L + LT DEFLECTION < 3/8".

3 NO SCALE TYP CF CONC INTERRUPTED VERT DEFLECTION CONN AT SLAB



DESIGNER NOTE:
1. DETERMINE IF GIRT IS REQUIRED. ELIMINATE GIRT IF KICKER IS CLOSE TO THE HEAD TRACK OR AT EA STUD.
2. DESIGN SLAB TO TAKE HORIZ AND VERT LOADS DUE TO THE KICKER.
3. NEED TO CONSIDER LONG TERM DEFLECTION OF CONCRETE IN OVERALL DEFLECTION CALCULATION TOTAL L + LT DEFLECTION < 3/8".

8 NO SCALE TYP CF CONC SPANDREL W/KICKER



DESIGNER NOTES:
1. NEED TO CONSIDER LONG TERM DEFLECTION OF CONCRETE IN OVERALL DEFLECTION CALCULATION TOTAL L + LT DEFLECTION < 3/8".

4 NO SCALE TYP CF CONC INTERRUPTED VERT DEFLECTION CONN AT BM

COMMENTARY

.EOR DESIGNED COLD FORMED STEEL FRAMING (CFSF) GENERAL ARRANGEMENT DETAILS SUPPLIED BY CIP FRAMING:

SHEET Z5.42C REPRESENTS TYP DETAILS USED WITH COLD FOR STEEL FRAMING. THESE GENE ARRANGEMENT DETAILS ARE N BE A STARTING POINT FOR THE COMMON EDGE CONDITIONS W USING A COLD FORMED STEEL SYSTEM FOR THE EXTERIOR C THESE DETAILS REPRESENT G GOOD PRACTICE AND MUST BE MODIFIED TO REPRESENT THE GEOMETRY OF THE SPECIFIC P THE INTENT IS TO SHOW THE GEOMETRY OF THE EDGE CON AND HAVE ALL SPECIFIC CF-TO CONNECTIONS DETAILED ON S Z5.4X. THE STRUCTURAL EDGE CONDITIONS SHOULD BE CUT F SHEETS Z3.0X. COMPLETED DI THIS SHEET CAN EITHER BE CU DIRECTLY ON FLOOR PLANS OR PARTIAL OR FULL HEIGHT WAL SECTIONS.

DETAIL NOTES:

1. CF STUD BY-PASS AT CIP SL EDGE WITH OR WITHOUT VENI THIS DETAIL AT FLOOR AND PA CONDITION WHERE YOU CAN F STUDS PAST THE FRAMING ON OUTSIDE AND YOUR TYPICAL C IN THE WALL ARE PUNCHED.
2. CF STUD BY-PASS AT CIP E BEAM WITH OR WITHOUT VENI THIS DETAIL AT FLOOR AND PA CONDITION WHERE YOU CAN F STUDS PAST THE FRAMING ON OUTSIDE AND YOUR TYPICAL C IN THE WALL ARE PUNCHED.
3. CF STUD INTERRUPTED BY C FLOOR SLAB WITH OR WITHOU VENEER. USE THIS DETAIL WHE STUD FRAMING IS USED AS INF BETWEEN FLOORS AND YOUR OPENINGS ARE PUNCHED. EXT FINISHES SHOULD PREFERABL JOINTED AT THE FLOOR LINE.
4. CF STUD INTERRUPTED BY C FLOOR BEAM WITH OR WITHO VENEER. USE THIS DETAIL WHE STUD FRAMING IS USED AS INF BETWEEN FLOORS AND YOUR OPENINGS ARE PUNCHED. EXT FINISHES SHOULD PREFERABL JOINTED AT THE FLOOR LINE.
5. CF STUD INTERRUPTED BY C ROOF SLAB WITH OR WITHOU USE THIS DETAIL WHERE STUD FRAMING IS USED AS INFILL BE FLOORS AND YOUR TYPICAL O ARE PUNCHED.
6. CF STUD INTERRUPTED BY C ROOF BEAM WITH OR WITHOU VENEER. USE THIS DETAIL WHE STUD FRAMING IS USED AS INF BETWEEN FLOORS AND YOUR OPENINGS ARE PUNCHED.
7. CF STUD SPANDREL PANEL SLAB EDGE PERIMETER BEAM WITHOUT VENEER. USE THIS D THE STUD EXTENDS LESS THA BEAM/ SLAB DEPTHS BELOW TO CONCRETE.
8. CF STUD SPANDREL PANEL SLAB EDGE PERIMETER BEAM WITHOUT VENEER. USE THIS D THE STUD EXTENDS MORE THA BEAM DEPTHS BELOW TOP OF CONCRETE.

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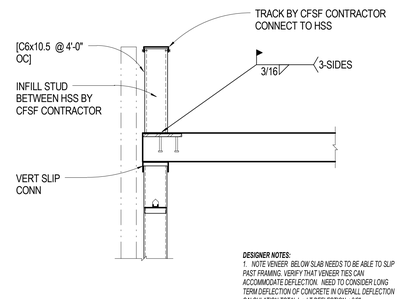
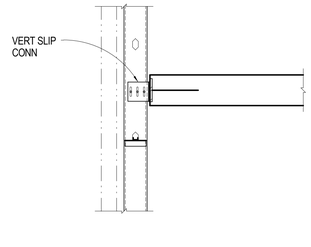
REFERENC DETAILS

SHEET TITLE:
TYP ASSEMBLIES

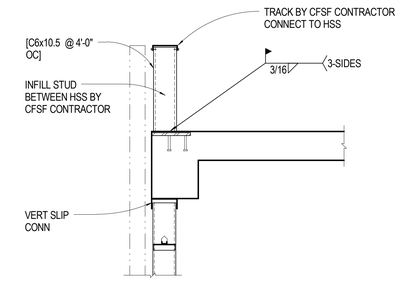
SHEET NUMBER:
Z5.42C



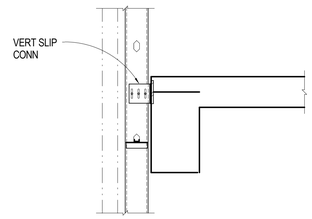
5 NO SCALE TYP CF-P CONC INTERRUPTED VERT DEFLECTION CONN AT ROOF SLAB



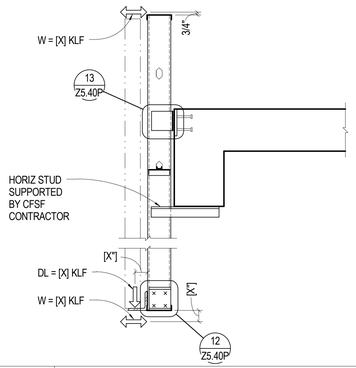
1 NO SCALE TYP CF-P CONC BYPASS VERT DEFLECTION CONN AT SLAB



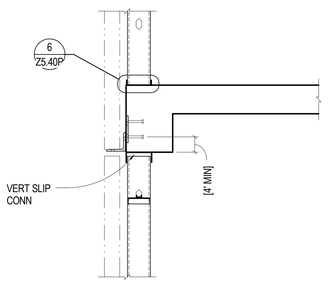
6 NO SCALE TYP CF-P CONC INTERRUPTED VERT DEFLECTION CONN AT ROOF BEAM



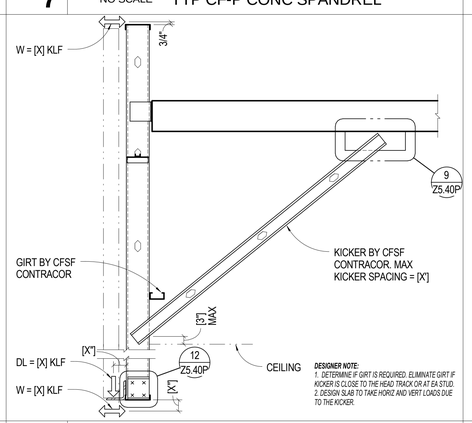
2 NO SCALE TYP CF-P CONC BYPASS VERT DEFLECTION CONN AT BEAM



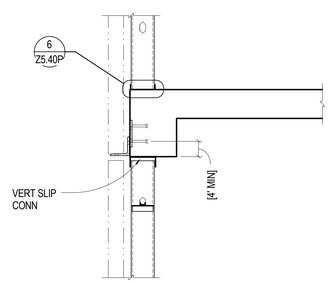
7 NO SCALE TYP CF-P CONC SPANDREL



3 NO SCALE TYP CF-P CONC INTERRUPTED VERT DEFLECTION CONN AT SLAB



8 NO SCALE TYP CF-P CONC SPANDREL W/KICKER



4 NO SCALE TYP CF-P CONC INTERRUPTED VERT DEFLECTION CONN AT BM

COMMENTARY

PERFORMANCE SPECIFIED CO
STEEL FRAMING (CFSF) GENEF
ARRANGEMENT DETAILS SUPP
CIP FRAMING:

SHEET Z5.42CP REPRESENTS T
DETAILS USED WITH COLD FOR
FRAMING. THESE GENERAL AF
DETAILS ARE MEANT TO BE A S
FOR THE MOST COMMON EDGE
WHEN USING A COLD FORMED
SYSTEM FOR THE EXTERIOR C
THESE DETAILS REPRESENT G
PRACTICE AND MUST BE MODI
REPRESENT THE ACTUAL GEO
SPECIFIC PROJECT. THE INTE
THE GEOMETRY OF THE EDGE
AND HAVE ALL SPECIFIC CF-TO
CONNECTIONS DETAILED ON S
THE STRUCTURAL EDGE COND
SHOULD BE CUT FROM SHEETS
COMPLETED DETAILS ON THIS
EITHER BE CUT DIRECTLY ON F
OR ON PARTIAL OR FULL HEIG
SECTIONS.

DETAIL NOTES:

1. CF STUD BY-PASS AT CIP SL
OR WITHOUT VENEER. USE TH
FLOOR AND PARAPET CONDITI
YOU CAN RUN THE STUDS PAS
FRAMING ON THE OUTSIDE AN
TYPICAL OPENINGS IN THE WA
PUNCHED.
2. CF STUD BY-PASS AT CIP E
OR WITHOUT VENEER. USE TH
FLOOR AND PARAPET CONDITI
YOU CAN RUN THE STUDS PAS
FRAMING ON THE OUTSIDE AN
TYPICAL OPENINGS IN THE WA
PUNCHED.
3. CF STUD INTERRUPTED BY
SLAB WITH OR WITHOUT VENE
DETAIL WHERE STUD FRAMING
INFILL BETWEEN FLOORS AND
OPENINGS ARE PUNCHED. EXT
FINISHES SHOULD PREFERABL
AT THE FLOOR LINE.
4. CF STUD INTERRUPTED BY
BEAM WITH OR WITHOUT VENI
DETAIL WHERE STUD FRAMING
INFILL BETWEEN FLOORS AND
OPENINGS ARE PUNCHED. EXT
FINISHES SHOULD PREFERABL
AT THE FLOOR LINE.
5. CF STUD INTERRUPTED BY
WITH OR WITHOUT VENEER. US
WHERE STUD FRAMING IS USE
BETWEEN FLOORS AND YOUR
OPENINGS ARE PUNCHED.
6. CF STUD INTERRUPTED BY
WITH OR WITHOUT VENEER. US
WHERE STUD FRAMING IS USE
BETWEEN FLOORS AND YOUR
OPENINGS ARE PUNCHED.
7. CF STUD SPANDREL PANEL
EDGE PERIMETER BEAM WITH
VENEER. USE THIS DETAIL IF T
EXTENDS LESS THAN [3] BEAM
BELOW TOP OF CONCRETE.
8. CF STUD SPANDREL PANEL
EDGE PERIMETER BEAM WITH
VENEER. USE THIS DETAIL IF T
EXTENDS MORE THAN [3] BEAM
BELOW TOP OF CONCRETE.

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REFERENC DETAILS

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TYP PERF SPEC ASSEMBLIES

SHEET NUMBER:
Z5.42CP